Notification

Notification is hereby given that TransTel Communications Inc. reserves the right to modify, change, update or revise this document from time to time as required without the prior obligation to notify any person, company or organization. Further, TransTel makes no warranty or representation, either expressed or implied, with respect to merchantability, or fitness of its products for a particular purpose.

IMPORTANT SAFETY INSTRUCTIONS

Installation Safety Precautions:
1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch un-insulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

The TransTel TD-824-I utilizes a 3-prong grounding power supply cord. This cord is not to be attached to any building surfaces. When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Read and understand all instructions.

2. Follow all warnings and instruction marked on the product.

3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.

5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.

6. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built in installation unless proper ventilation is provided.

7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home or office, consult your dealer or local Power Company.

8. This product is equipped with a three-wire grounding type plug. A plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

9. Do not allow anything to rest on the power cord or place it where it will be abused by persons walking on it.

10. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.

12. To reduce the risk of electric shock, do not disassemble this product, but take it to qualified service personnel when service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect re-assembly can cause electric shock when the appliance is subsequently used.

13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

A. When the power supply cord or plug is damaged or frayed.

B. If liquid has been spilled into the product.

C. If the product has been exposed to rain or water.

D. If the product does not operate normally by following the operating instructions. Adjust only those control, that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.

E. If the product has been dropped or the cabinet has been damaged.

F. If the product exhibits a distinct change in performance.

14. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.,

15. Do not use the telephone to report a gas leak in the vicinity of the leak.

SAVE THESE INSTRUCTIONS

TransTel Model TD-824-I
Digital Telephone System
General Description - Installation - Programming Forms Manual

Table of Contents

General Description - Introduction

The General Description section contains an easy to understand overview of the TransTel® TD-824i Digital Telephone System. It is the intent of this document to provide both technical and non-technical readers with information pertaining to the system building blocks, capabilities, key highlights, electrical, physical and environmental characteristics of the TransTel TD-824i Digital Telephone System.

FCC Rules and Regulation

In compliance with the requirements of Part 68 of the Federal Communications Commission Rules and Regulations for connection of terminal system equipment to the telephone network and for your convenience, the following information is presented.

FCC Registration Number

The TransTel TD-824i is registered with the as a key system. The FCC Registration Number is 3A7TAI-35152-KF-E for key systems registration.

Ringer Equivalence Number

Ringer Equivalence 0.3B.

Notification of the Telephone Company
Customers connecting terminal equipment to the telephone network shall, upon request of the Telephone Company, inform the Telephone Company of the particular line(s) to which such connection is made, the FCC registration number and ringer equivalence number (REN) of the registered terminal equipment.
The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

Direct Connection to a Party-Line or Coin Operated Telephone Line is Prohibited.

Incidence of Harm to the Telephone Lines	
Should terminal equipment cause harm to the Telephone Network, the Telephone Company shall, where practical, notify the customer that service may be temporarily discontinued. However, where prior notice is not practical, the Telephone Company may temporarily discontinue service, if such action is reasonable in the circumstances. In case of such un-notified temporary discontinuance of service, the Telephone Company shall:	
(a)	Promptly notify the customer of such temporary discontinuance of service.
(b)	Afford the customer the opportunity to correct the situation which gave rise to the temporary discontinuance.
(c)	Inform the customer of the right to bring a complaint to the FCC pursuant to the procedures set out in Subpart E of Part 68 of FCC Telephone Equipment Rules.

Compatibility of the Telephone Network and Terminal Equipment.

(a)	Availability of telephone interface information.
	Technical information concerning interface parameters and specifications not specified in FCC Rules, including the number of Ringers which may be connected to a particular line, which is needed to permit Terminal Equipment to operate in a manner compatible with Telephone Company communications facilities shall be provided by the Telephone Company upon customer's request.
(b)	Changes in Telephone Company Communications Facilities, Equipment, Operations and Procedures.

The Telephone Company may make changes in its communications facilities, equipment, operations or procedures where such action is reasonably required in the operation of its business and is not inconsistent with the rules and regulations in FCC Part 68 of the FCC Rules and Regulations. If such changes can be reasonably expected to render any customer Terminal Equipment incompatible with Telephone Company Communications Facilities, or require modification or alteration of such Terminal Equipment, or otherwise materially affect its use or performance, the customer shall be given adequate notice in writing to allow the customer an opportunity to maintain uninterrupted service.

Radio Frequency Interference

This equipment generates and uses radio frequency energy and if not installed and used properly and in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type-tested and found to comply with the limits for a Class A computing device in accordance with the specification in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, this is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Re-orient the receiving antenna.
Relocate the equipment with respect to the receiver.
Move the equipment away from the receiver.
Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

Description

The TD-824i is an advanced digital telephone system employing a microprocessor stored program and digitally controlled solid state time-division switching. The TD-824i system is specifically designed for small business as well as residential applications. At the forefront of the system's design is a universal concept to adapting and connecting with a variety of communications devices. Productive TransTel Digital Key Telephones offer thoughtfully designed feature access to keep you connected with one another and with customers. TransTel technology leads the industry in providing for compatibility with devices such as fax machines, answering machines, cordless phones, computer modems and other office/home equipment.
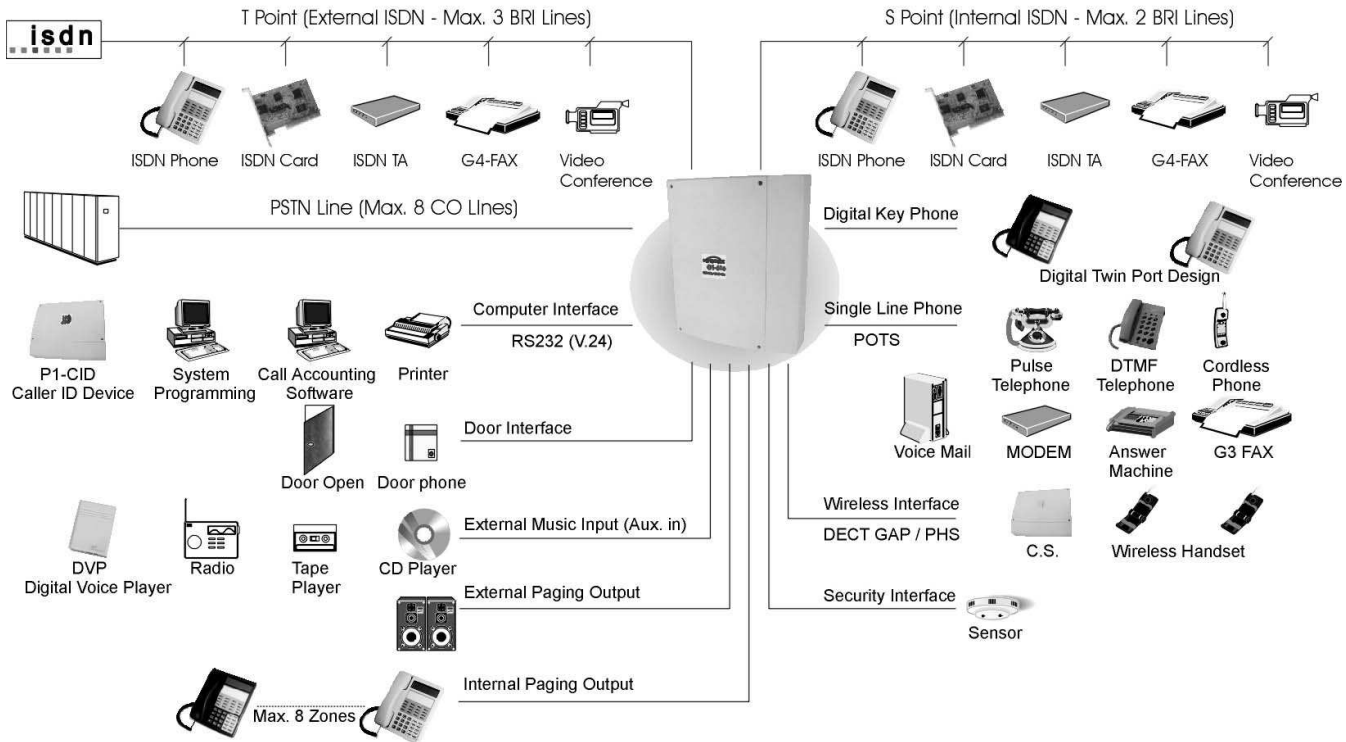
Key highlights of the TD-824i includes:

Economy and Efficiency

The base system is equipped to support four (4) CO lines and eight (8) digital stations. The system may be expanded to a maximum of eight (8) CO lines / or four (4) CO lines and three (3) ISDN Basic Rate Interfaces. Station cards may be selected to allow practically any combination ranging from all *TransTel* Digital Key Sets to all industry standard Single Line Telephone sets, with almost any combination of the two types. In addition to being cost effective at the initial phase and for expanding to it's maximum capacity, the TD-824i system also is economical to operate, as it consumes about the same amount of electricity at full configuration as a 60 watt light bulb. A maximum of 8 CO lines (or 3 ISDN BRIs) and 24 Extensions can be accommodated. This allows a wide variety of applications for the system to work effectively

Easy Installation

- "Factory Ready" - All TD-824i Telephone systems are "ready to go" right out of the box. A default database is factory installed on each system, which meets the needs for most installations. In most cases, this alleviates hours of on site time, reducing installation costs for both dealer and customer.
- "Small & Compact" - The Key Service Unit's small size takes little space for installation and is about the size of a piece of legal paper.

Easy Maintenance

- Solid-state design minimizes trouble and eliminates periodic maintenance.

- Easy Expansion. Various Interface Cards for simple, modular expansion.

- Versatile programming and options for ease of selection.

- Database Battery Back Up - Customer data is backed up when the power is turned off and back on. Batteries can periodically be replaced with power on using commercially available replacements.

- Battery Back Up (System Operation) - TD-824i systems can be equipped with an optional battery back up which keeps the system operational for up to 4 hours in the case of a commercial power failure.

- Customer Care Programming - Customers and service personnel can easily communicate and perform programming right over the telephone. TransTel telephone systems allow programming and voice conversations to co-exist at the same time.

- Advanced software upgrades – Through the RS232 connection, system software can be upgraded easily without firmware "chip" replacements.

Flexibility of System Applications

Unlike other conventional systems in the TD-824i size range, the installer will find an unprecedented range of customer database programmability. In "system parameters" there are extensive options for various timing settings related to features. An array of parameters is programmable for signaling options on outside lines and internal single line telephone sets. The installer may Enable/Disable many system wide features. And in class of service, there are over 20 options for each station providing maximum flexibility for nearly any application.

Varied Extension Alternatives

You can connect Transtel DK series Key telephones, TransTel Access Control Phones (ACP), Digital Door Phones and conventional industry standard single line sets, Modems, Answering Machines, Cordless phones, etc. directly to the KSU. This feature provides you with the choice to select different extension equipment to suit individual applications.

Digital Twin Port

Install two Digital Key telephones on a single two-wire cable. *No Master and Slave difference*. Any key telephone can be plugged in and unplugged with no interference to the other. This feature allows easy cabling, easy expansion and easy maintenance.

Liquid Crystal Display

The TD-824i Series Model DK-1/D and TransTel's DK-3D telephones are equipped with a large, easy to read LCD display. The LCD is 32 characters total, comprised of 2 rows by 16 characters each. This LCD provides an invaluable tool for simplifying the use of the telephone by identifying the calling extension by name, outside lines by name and self prompting displays for feature access. Station feature usage is made simple with the help of the LCD display. Continuous prompting information is displayed during calls so that users know what to do and when to do it.

32-character LCD Display shows:

- Time
- Dialed telephone number
- Voice Mail Messages
- CO Line Names
- Last Number Redial
- Speed dial number

- Last number dialed
- The status of operation/function
- Absent messages
- Speed Dial Directory
- Calling Party Name
- Input data during system data entry

TransTel Telephone Model DK-1/D   **TransTel Telephone Model DK-3/D**

TransTel Telephone DK-2 (shown with optional 66 button DK-2DSS console)

The DK-2 expands the LCD display to a 4 line indication, providing an enhanced view ot call progress and adding the ability to utilize the 4 "Softkeys"

System Specifications

System Capacities / Maximum

CO/PABX Lines	8
Key Telephones / ACP / Digital Doorphones (Maximum)	24
Single Line Phones(Maximum)	8
Control Relay	1 per cabinet 1 per ACP or Digital Doorphone
External Input Sensor	1 per cabinet 1 per ACP or Digital Doorphone
Intercom Paths (Local)	3
Doorphone	1 analog (requires single line card) < 24 Digital doorphones
External Music	1
Speed dial	Total 600 sets for Private/System Speed Dial.
Private Speed Dial	20 sets per station(Max.)
System Speed Dial	600 sets (Max.)

Electrical Specifications

CONTROL SYSTEM	Stored Program
CPU	8 /16 bit CPU
SWITCHING METHOD	TDM (Time Division Multiplex)
POWER REQUIREMENTS	
	100 - 120 V AC, (50/60Hz) 0.9 AMPS
	210 - 230 V AC, (50/60Hz) 0.45 AMPS
Dedicated AC line and a good earth ground for power supply	
POWER FAILURE	
System operation for 180 minutes (full load) or for 4 hours (normal load) by installing batteries (with two 12 V DC batteries 6.5 AH for each)	
POWER DISSIPATION	
Common Equipment Unit (idle) 21 W (full) 56 Watts	
Each Telephone	
Electronic Sets	2.8 Watts, maximum
Single Line Telephone	1.25 Watts
DIALING	
Outward	Dial Pulse - 10 pps (Pulses Per Second), DTMF
Internal	Dial Pulse - 10 pps (Pulses Per Second) / DTMF / Digital

MAXIMUM LOOP RESISTANCE/IMPEDANCE	
Digital Key Telephone	Less than 40 ohms 26 AWG / 650 feet (200 meters)
Single Line telephone	Less than 800 ohms 22 AWG / 2,620 feet (800 meters)
Doorphone	Less than 40 ohms
Music Source Input Impedance	600 ohms
Maximum Input	0.775 VRMS
INTERNAL RELAY CONTACTS	
Type	SPST
Rating	3 AMP, 110VAC/220VAC
Function	Door Switch, Music on Hold, etc
CABLE REQUIREMENTS	
CO/PABX Line	Twisted 1 Pair (2 wires)
Key Telephone	Twisted 1 Pair (2 wires)
Doorphone	Twisted 1 Pair (2 wires)
Door Switch	Twisted 1 Pair (2 wires)
External Music Source	Twisted 1 Pair (2 wires)
Single Line Telephone	Twisted 1 Pair (2 wires)

Mechanical Specifications (Key Service Unit)

CABINET DIMENSIONS		
233mm W	76mm D	290mm H
9.17"	2.99"	11.4"
WEIGHT	2.3 Kg (Configuration: 2 x 8)	
	5.0 lbs	

Mechanical Specifications (Battery Back Up Housing)

CABINET DIMENSIONS		
15.5" W	3.0" D	5.75" H
WEIGHT	With Batteries -16 lbs Without Batteries- 4 lbs.	
Mounting Screws	12.25" center to center	

Environmental Specifications

	OPERATING CONDITIONS	STORAGE CONDITIONS
Temperature	0º to 45º C (32º to 113º F)	-40º to 66º C (-40º to 150º F)
Humidity	10 to 95% relative non-condensing	10 to 95% relative non-condensing

Features

System Features

1A2 Emulation
Attendant Console Assigment (4) Consoles
Account Code Capability
Attendant Overflow
Automatic Line Access
Automatic Line Search
Automatic Ring-down
Automatic Wake-up
Battery Charger
Behind PABX Operation
Centrex Operation
Class Of Service (10) Classes
CO Line Groups
CO Line Hunting
CO Line Name Programming
CO Line Ring Types
    Linear
    Common Audible
    Circular
    Add on Ring
Day/Night Service
    Manual/Automatic Switch
Dial 9 Group (8) Groups
Direct In Line
Dial By Name
Dial Mode Selection (DP/DTMF)
Dial Pulse to DTMF Conversion
    allowing switch to DTMF during call
Distinctive Ringing
DTMF Signaling
Dual Port Capability
End to End Signaling
Easy Installation and Operation
Flash (Programmable)
Flash Memory Backup Memory
Flexible Expansion
Flexible Ringing Assignment
Flexible Key Group Assignment (8) Templates
Flexible Number Plan 2,3 or 4 Digit
Flexible Time Format 12/24 Hour
Forced Account Code Assignment

Intercom
Intercom Single Digit Assignment
Intercom Ring / Voice Select
Intercom Dialing Restriction
Host PABX Access
Hot line
Line Group Assignment
Loud Bell Assignment
Multiple Attendant Consoles
Multiple Trunk Groups
Night Transfer
On Call Programming
Paging
    Internal
    Zone
    Meet Me
Password Assignment
    DISA
    System programming
    Toll Override
Pause
Pick Up Groups
Power Fail Transfer
Security Code
Single Digit Dialing
Station Group Assignment
Station Hunting
Station Lock
System Speed Dial and Personal Speed Dial
System Date & Time Setting
System Time-Reminder Service
Telephone Directory
Toll Control
    Day / Night
Tone to pulse dialing
Trunk Queuing
Trunk to trunk connections
Uniform Call Distribution
Voice Mail Compatibility

Station Features

Advisory Messages
    System
    Personal
Access to System Programming from any station
Account Code Capability
Auto Hold
Auto Hold Recall
Automatic Call Back
Automatic Answer-Intercom
Automatic Line Access
Automatic Redial
Automatic Volume Increase
Brokers Call (Split/Swap)
Call Duration Timer (LCD Phones)
Call Waiting
Call Forwarding
    All Calls
    Busy
    No Answer
    Busy / No Answer
    External
Call Pickup
Call Split
Call Transfer
Calling Name Display (LCD Phones)
Calling Number Display (LCD Phones)
Camp On
Chain Dialing
Conference
Dial By Name (LCD Phones)
Dial Access to Attendant
Direct Station Selection
Doorphone Access
Do Not Disturb (DND)
Dual Color LED
Duration Time Display (LCD Phones)
Executive Override (Barge-In)
External Call Forwarding

Flash (Open Loop Timed Flash)
Group Listen
Hands-free Answer Back
Hearing Aid Compatibility
Headset Compatibility
Hold (Exclusive / System)
Hold Recall
I Hold Indication
I Use Indication
Intercom
Intercom ring / voice interchange
Intercom Step Call
Intercom Voice Announce
Last Number Redial
Message Waiting
On Hook Dialing
Prime Line Select
Privacy
Privacy Release
Private Line
Pulse/Tone Conversion
Ring Frequency Selection
Ringing Line Preference
Saved Number Redial
Speed Dialing
Station Lock / Unlock
Station Monitor
Store Speed Dial/DSS Number
Timed Reminder Service
    System
    Station
Toll Restriction Override by Account Code
Trunk Queuing
Volume Control
    Handset
    Speaker
    Ringer

Optional Features

Automated Attendant
Battery Backup (System)
Direct Inward System Access (DISA)
Doorphone / Door Latch
External Music Source

Music On Hold
Relay Control
RS232
Security Sensor/Door Open Indication
Station Message Detail Record (SMDR)
Voice Mail using in band signaling

Parts & Peripherals

System Modules

Model	Description
TD-824i	KSU with 4 CO lines, 4 Digital twin ports
TD-TKU-4	Trunk Card : 4 CO lines
TD-CID/FSK	Caller ID daughterboard. Installs on TD-TKU-4. Converts 4 lines for Caller ID Features. FSK Format (U.S.)
TD-SIU-2	ISDN S/T interface with 2 circuits
TD-SIU-3	ISDN S/T interface with 3 circuits
TD-DKC-8	Station Card : 4 Digital Twin-port (Supports 8 key telephones)
TD-SLC-8	Single Line Card : 8 SLT ports (maximum 1 per system)
TD-SLC-2	Single Line Card : 2 SLT ports (maximum 1 per system)
TD-RGU	Ring Generator Unit

Type of Phones

Model	Description
DK1-D/I DK1-D/G	*Multifunction Key Telephone. Includes 32 character LCD display, speakerphone, handsfree, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial. (Ivory or Gray)*
DK1-S/I DK1-S/G	*Multifunction Key Telephone. Includes speakerphone, handsfree, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial. (Ivory or Gray)*
DK1-B/I DK1-B/G	*Multifunction Key Telephone. Includes 8 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial. (Ivory or Gray)*
DK2-D/I DK2-D/G	*Multifunction Key Telephone. Includes 4 line LCD display, blue message waiting LED, top mounted speaker, headset jack, speakerphone and handsfree intercom. (Ivory or Gray)*
DK2-BT/I DK2-BT/G	*Same as listed for DK2 above, but with wireless Bluetooth adapter installed in telephone set. Note: Bluetooth compatible wireless headset not included. (Ivory or Gray)*
DK3-D/I DK3-D/G	*Includes 2 line LCD display and styled similar to the DK2 telephone. For smaller applications and where fewer buttons are required. 10 programmable buttons for lines, stations, features or speed dial. Speakerphone, top mounted speaker, headset jack and handsfree intercom. (Ivory or gray)*
DK3-B/I DK3-B/G	*Basic telephone set. 10 Programmable buttons for lines stations or buttons. Styled similar to DK3-D, but without LCD display. On-hook dialing. (Ivory or gray)*
DK-ACP	DK1-ACP Access Control Phone – Doorphone or Speakerphone *(Ivory only)*
DK-DPU1	DK-DPU1 Digital Doorphone Unit. Includes 1 relay for door/gate release and 1 sensor for intrusion or other use.
DK-WMK/I DK-WMK/G	Wall Mount Kit for DK1 Series Telephones *(Ivory or Gray)*

Peripheral Devices

Model	Description
BBOX0	Battery Box without Batteries
BBOX1	Battery Box with Batteries

Optional Interface Cards

Model	Description
TD-VSC	Voice Service Card (60 sec. / 8 voice segments)- Auto Attendant, Wake-up, Message Waiting
TD-MSC	RS232/Relay/Sensor/External Paging Interface
TD-CFC	Conference / Expansion Card – 32 parties conference / Expand system from 6 x 16 to 8 x 24

Associated Software

Model	Description
TD-RPS	Remote Programming Software

System Installation - Introduction

This section provides directions for installing the system and optional equipment.
The installation must be performed by qualified service personnel.

Main components of the system are:

Key Service Unit, which includes:
- Power Supply Unit (TD-PWU)
- Main Board Unit (TD-MBU / Common Control and four digital twin port circuits)
- Trunk Unit (TD-TKU / TD-SIU)

Optional Expansion Cards:
- Trunk Card (TD-TKU / TD-SIU)
- Digital Station Card (TD-STC – four digital twin port circuits)
- Single Line Station Card (TD-SLC – eight single line port circuits)
- Conference Card (TD-CFC)
- Multi-Service Card (TD-MSC)
- Voice Service Card (TD-VSC)
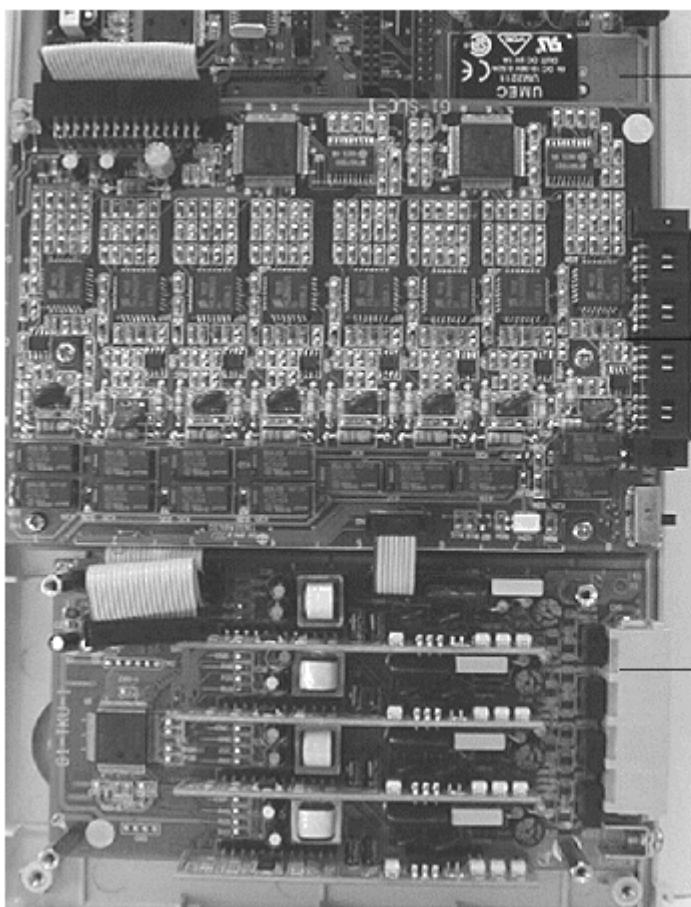
NOTE: Please follow the directions step by step. The TD-824i system should be installed in strict accordance with this manual.

Site Requirements

Location

Choosing The Right Environment

- System should be installed in a clean, dry, secure location. This location must have adequate ventilation, and a temperature from 0ºC to 45ºC (32ºF to 113ºF), with 10% to 95% non-condensing relative humidity. DO NOT install the equipment near sources of static electricity, excessive vibration, or water. Avoid direct sunlight.

Installation Checklist

INSTALLATION REQUIREMENTS	*VERIFICATION*
MOUNTING SURFACE	Flat surface with adequate space for main cabinet, power supply, wiring and optional Battery Backup cabinet.
AC LINE	AC line should be dedicated exclusively to the system.

POWER OUTLET	Power Outlet must be a
	     3-wire grounded outlet plug, having parallel blades
	     and ground pin.
	Input power Line capacity requirements - 10 amperes.

SURGE PROTECTION	A Surge Protector is recommended on the dedicated AC line.
VENTILATION AND TEMPERATURE	Humidity: 10% to 95% relative non-condensing Temperature:32ºF to 113ºF (0ºC to 45ºC).
EARTH GROUND	A proper ground connection. (14 AWG)
SERVICEABILITY	Lighting conditions and working space adequate for future service.

Equipment Requirements

- Unpack, Check and Verify Equipment - Unpack the telephone equipment boxes and verify the contents in accordance with the packing list provided. If any discrepancies are noticed, please contact TransTel Communications.
- Damaged Boxes - If you notice any damage to the packages, please notify both the shipper and TransTel at once.
- List of parts included in basic KSU box:
    - KSU Main Cabinet
    - Power Supply
    - Mounting Template
    - Mounting Screws
    - Station Connectors
    - Spare Fuses
    - Cable Cover

Installation

Caution
1. **This system should be installed only by qualified service personnel.**
2. **Do not install the Power Supply unless you have read the following instructions and completed all the installation and wiring.**
3. **STATIC SENSITIVE DEVICES! Please handle with care.**

Installing expansion and optional cards

In this step you will be installing printed circuit cards on to header pins of the main board in the basic cabinet. Take your time and extra care to assure the printed circuit cards are properly aligned. After installing each option and expansion card, perform a visual inspection to assure the printed circuit card is installed properly.

1. Position the cabinet on a flat surface like a table or countertop. Avoid doing this on carpet.
2. Remove the 4 screws located at the corners of the cabinet and lift the front cover off.
1. Locate the expansion and option cards and unpack them at this time.
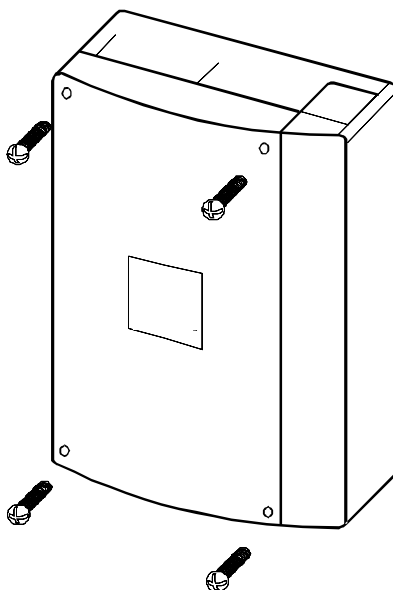
Installing expansion and option cards (continued)

TD-CFC - Conference Card

- Install this card on CN6 of the TD-MBU.
- Be sure that the component side of the TD-CFC is facing in towards right of KSU.
- CFC card is necessary to expand the system from 6 x16 to 8x 24.
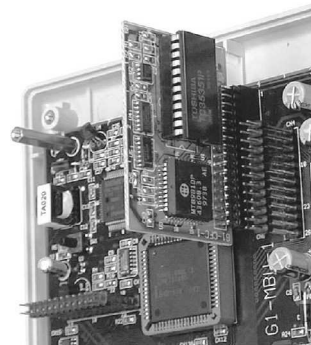
TD-MSC - Multi Service Card

- Align CN1 of the MSC card with CN4 of the TD-MBU.
- Align the hole on the right side of the MSC with the standoff.
- Once aligned push the MSC on the connector.
- Place the screw into the standoff securing the MSC card.
- When installed correctly the connectors should be easily accessible through the main panel.
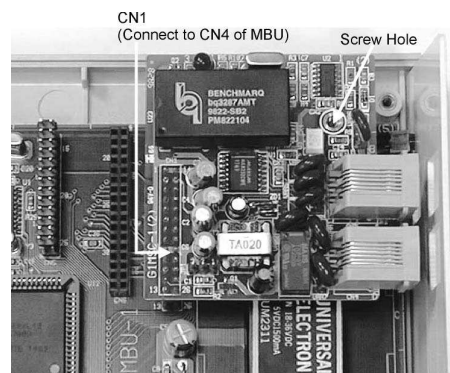
G1-VSC - Voice Service Card

- Align CN1 of the G1-VSC card with CN5 of the TD-MBU.
- Align the hole on the left side of the VSC with the standoff.
- Once aligned push the VSC on the connector.
- Place the screw into the standoff securing the VSC card.
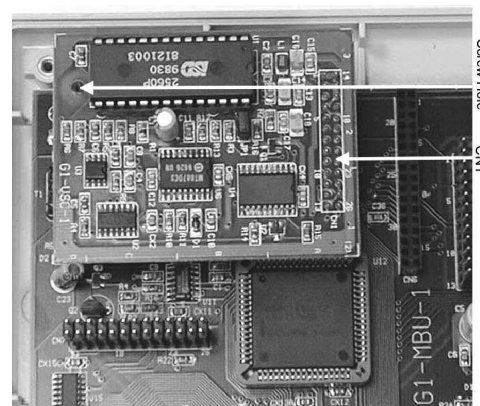
TD-TKU - 4 Port CO Line Card

● Align four holes of TD-TKU with the standoffs on top of the existing TD-TKU or TD-SIU card provided for in the basic key service unit. Once aligned, place the four screws into the standoff securing the TD-TKU card.
● Verify that the TD-TKU that was installed in the basic KSU has JP1 set to the 'TKU1' position..
● Set JP1 on the new installed TD-TKU to 'TKU2'.
● Connect an attached cable between CN1 of TD-TKU to CN3 of TD-MBU.
● Connect an attached cable between CN4 of TD-TKU to CN3 of TD-SLC for power failure transfer.
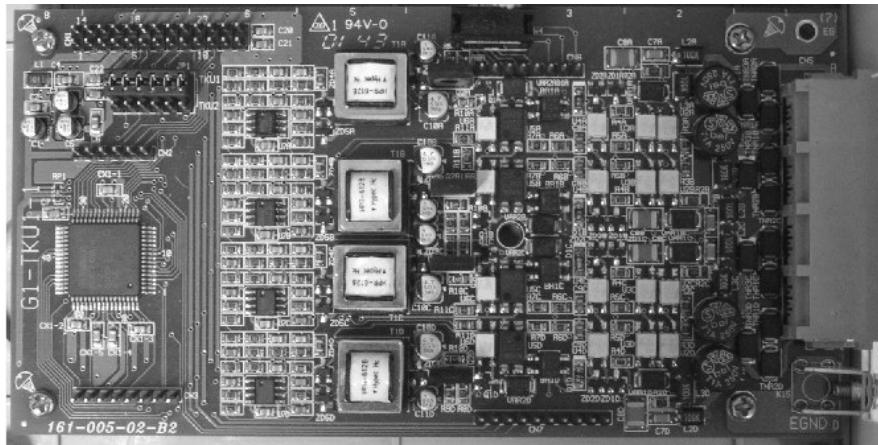
TD-TKU 4 Circuit CO Trunk Card
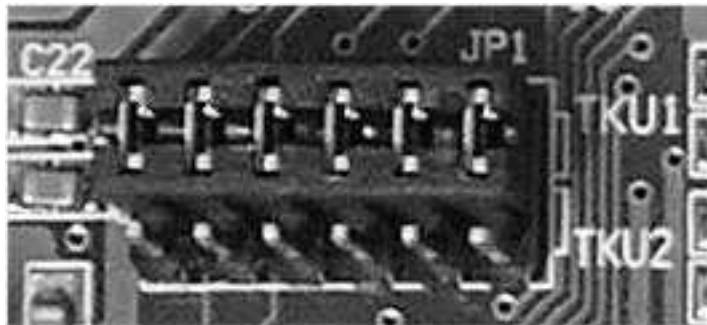
TD-TKU Jumper JP1 – Basic Card is strapped for TKU1
Expansion Card is strapped for TDK2 (Basic Card shown)

TD-STC - Digital Station Expansion Card
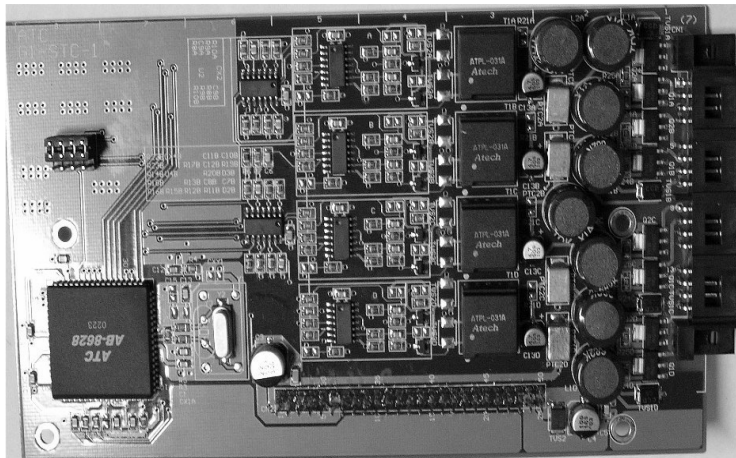
TD-STC – Digital Station Expansion Card

For the 1st TD-STC card:
● This expands KSU from 8 to 16 stations.
● Set JP1 on TD-STC to 'STC1' position.
● Align CN2 of the TD1-STC card with CN2 f the TD-MBU.
● Align four screw holes on TD-STC with the standoff.
● Once aligned push the TD-STC on the connector.
● Place the screw into the standoff securing the TD-STC card.
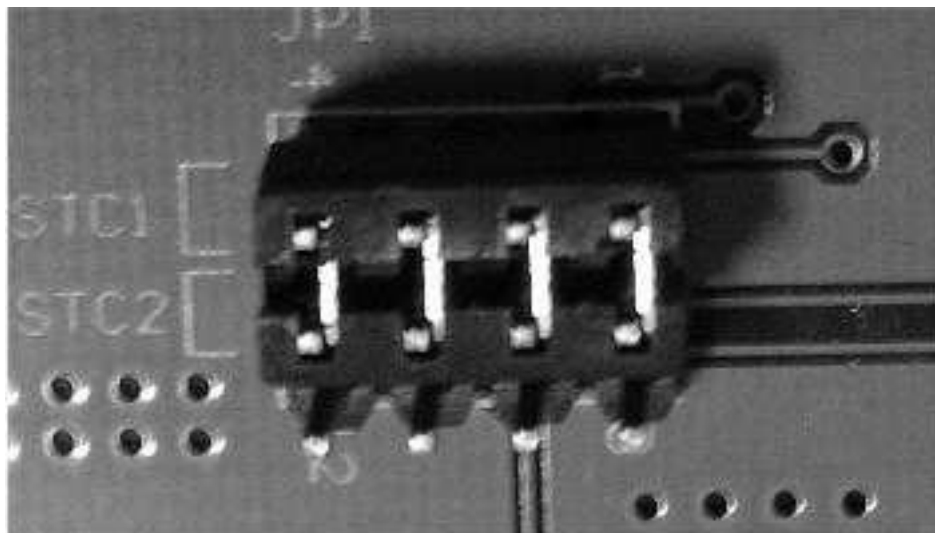
TD-STC Jumper JP1 – Shown set for first card position (stations 9-16)

For the 2nd TD-STC card:
● This expands KSU from 16 to 24 stations.
● Install TD-CFC card.
● Use the attached three standoffs to replace the original screws on the 1st TD-STC card.
● Set JP1 on the 2nd TD-STC to 'STC2' position.
● Align CN2 of the two TD-STC cards together.
● Align four screw holes on TD-STC with the standoff.
● Once aligned push the TD-STC on the connector.
● Place the screw into the standoff securing the G1-STC card.

TD-SLC - Single Line Station Adapter Card

Install G1-SLC on TD-MBU:
- Connect the attached cable between CN1 of TD-SLC card to CN7 of the TD-MBU.
- Align four screw holes on the TD-SLC with the standoffs.
- Place the screws into the standoffs securing the TD-SLC card.
- Connect the attached cable between CN3 of TD-SLC to CN4 of TD-TKU for power fail transfer. (Power fail Transfer will transfer the CO lines to the first 4 stations of TD-SLC card.)
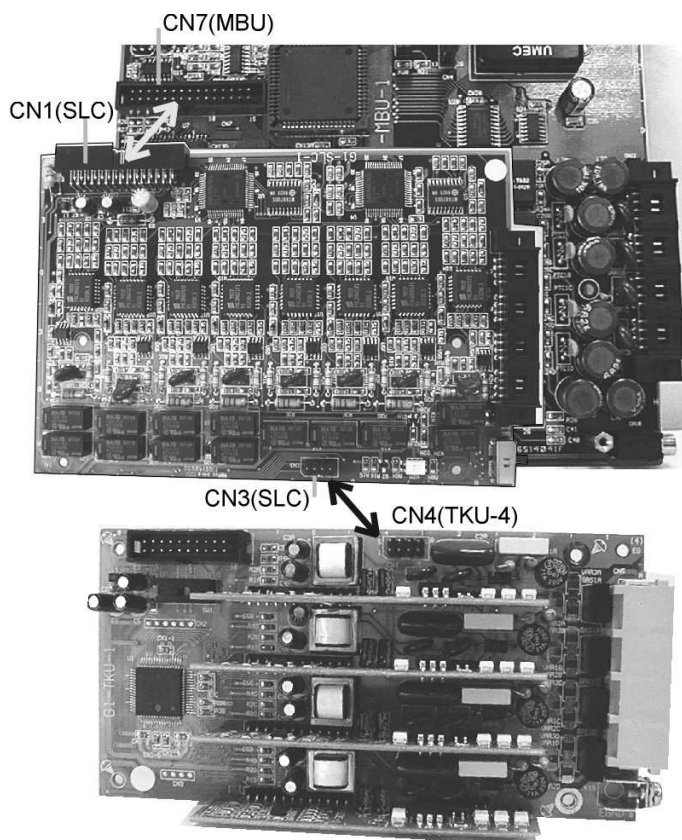
Install TD-SLC on the top of TD-STC:
- Install TD-CFC card.
- Use the attached three standoffs to replace the original screws on the 1st TD-STC card.
- Connect the attached cable between CN1 of TD-SLC card to CN7 of the TD-MBU.
- Align four screw holes on the TD-SLC with the standoffs.
- Place the screws into the standoffs securing the TD-SLC card.
- Connect the attached cable between CN3 of TD-SLC to CN4 of TD-TKU for power fail transfer. (Power fail Transfer will transfer the CO lines to the first 4 stations of TD-SLC card.)

Note: *Only one TD-SLC Card may be installed in a TD-824i system. It will always be configured as station equipment ports 31 through 38.*

TD-RGU - Ring Generator Unit
- The ring generator installs inside the power supply unit.
- Remove the cover of the power supply by taking out the 4 screws located on each corner.
- Inside the TD-RGU are 4 screws and a connecting cable.
- Align the TD-RGU with the 4 holes and secure by installing the screws provided.
- Install the cable from the TD-RGU to the 4 pin header

Voltage Selection Check

● Make a check to assure the power supply jumper setting is for the proper voltage.

When complete, place the power supply cover back on the power supply.

Replace Cover

With the expansion and option cards installed and the battery insulator removed, replace the cover and install the 4 screws removed earlier.

This concludes the installation of expansion and option cards!
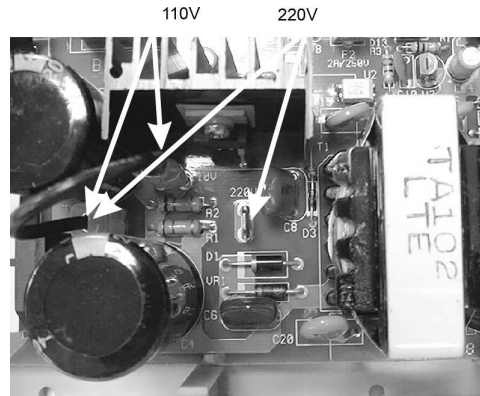
Backboard

Be sure to plan and allow enough space to mount and connect the key service unit, power supply and system battery back up if applicable.

Key Service Unit

Use the enclosed paper template to locate the mounting position for the Key Service Unit. Drill appropriately spaced holes and mount the KSU on the wall. When mounting the KSU, make certain that there is adequate room for the system power supply and that the connecting cable between the Power Supply and the KSU will reach the KSU. The same applies for the battery back up unit.
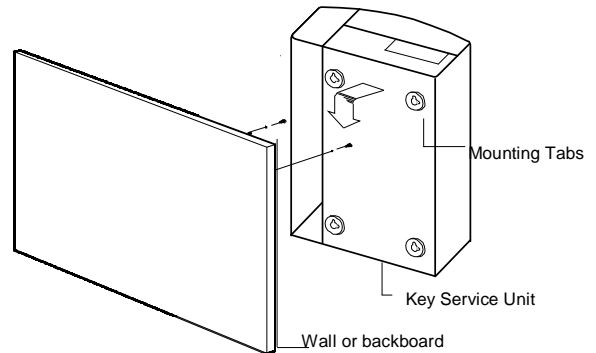
Power Supply

Dedicated Power Source - The power supply must be connected to a dedicated AC outlet.
Be sure that the third wire earth ground of the AC circuit is connected to a good electrical ground. If a music source is installed, it must be connected to a separate AC circuit, rather than the system's dedicated AC line cord.

Check Your Voltage Selection Jumper
Verify that the input voltage and input voltage jumper are correct before you power on the system. The input voltage is set according to the Customer's requirement before shipping. However it is important to verify that the setting is correct prior to initial system power up.

Power Supply voltage options for the unit:
100-VAC: 100 to 120 V AC (50/60Hz) or 220-VAC: 210 to 230 V AC (50/60Hz).

Mount Power Supply
Using screws provided with the system, mount the power supply close to the KSU so that the connector reaches from the Power Supply to the KSU.

Preparing The External Battery Backup

The Key Service Unit can have two external backup batteries in series (12 volts each) for emergency power and when a power failure takes place.

If you are installing an optional Battery Backup (SK-BCAB/B), make certain that there is adequate room for its installation. Make certain that the Battery Backup is mounted close enough to the Power Supply that the interconnecting cable between the Battery Backup and the Power Supply can connect.
Do Not Connect the Battery Backup at this time!
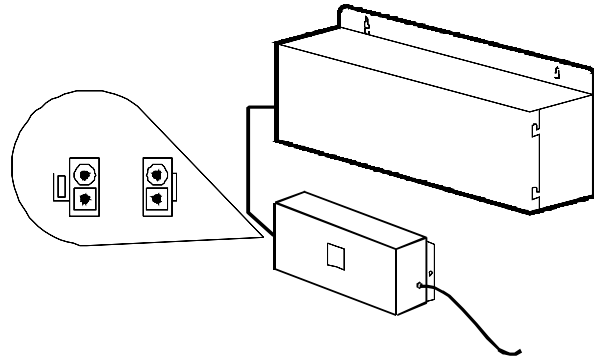
> *Do Not Connect the Battery Backup at this time! Battery Backup should not be connected to the System power supply until all power up testing has been completed!*

Charging the Battery

The rechargeable batteries are automatically charged when the KSU is plugged in.
When System is in a full-load condition (eight CO trunks and twenty four extensions all in use), the batteries provide a minimum of 1 hour's continuous use. Change the batteries every two years.

Installing or Replacing Batteries

Caution

To Reduce the Risk of Fire or Injury to persons, Read and Follow these Instructions.

1. Use only the following type and size batteries:
    12 Volt 6.5 Amp/Hour "Gel-Cell" sealed batteries (2).
    Dimensions, approximately 3 1/4" (H), 5 15/16" (W), 2 1/2" (D).
    PowerSonic model PS660 or equivalent.
2. Do not dispose of the batteries in a fire. The cell may explode. Check with local codes for possible special disposal instructions.
3. Do not open or mutilate the batteries. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
4. Exercise care in handling batteries in order not to short the battery with conducting materials such as rings, bracelets, and keys. The battery or conductor may overheat and cause burns.

This product is defined as a secondary battery operated device. As such, the following instructions should also be read and followed:

1. Charge the batteries provided with or identified for use with this product only in accordance with the instructions and limitations specified in this manual.
2. Observe proper polarity orientation between the batteries and battery charger.
3. Do not mix old and new batteries in this product.
5. Do not mix batteries of different sizes or from different manufacturers in this product.

Before installing or replacing batteries, disconnect the battery supply unit to the KSU by removing the polarized battery connector at the KSU. Due to the weight of the batteries, it is advised that the battery cabinet be removed from the wall before working on it.

System Ground

It is strongly recommended that the system be grounded by connecting a heavy, insulated copper wire (e.g., 14AWG or larger) between the grounding bolt on the right-lower side of the cabinet and an earth ground.
Do not connect the grounding wire of the KSU to a computer, telex, or any other external device.
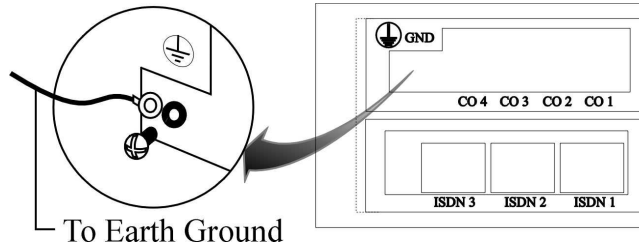
KSU Connecting (Main) Panel Layout

The following illustration should be used as a reference when connecting equipment to the TD-824i KSU.
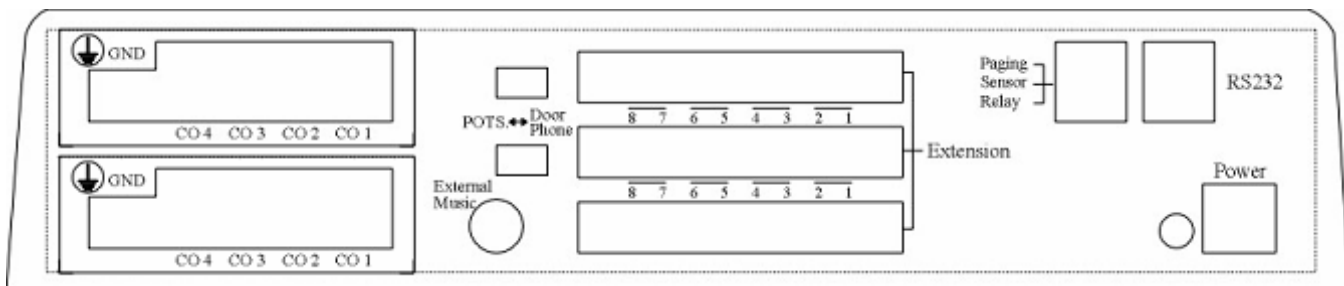
Refer to the wiring diagram located on the inside of the cable cover for all connections

Connecting Stations

The station cabling for the TD-824i should be a home run from the jack to the telephone room. The termination should be at conventional 66 type connecting blocks or directly to the provided station connectors. One pair twisted wiring is required for each station location. Attention to proper cabling will help ensure a successful installation and minimize service calls after installation. Some guidelines for running station cable are as follows:

- Avoid running cable parallel to fluorescent light fixtures or electrical lines not in conduit. If these obstacles are unavoidable, run the cable at right angles across them.
- Do Not run station cable inside conduit already occupied by electrical wiring.
- Do Not run station cable near equipment with electric motors or strong magnetic fields.
- Do not place station cable on the ground where it can be stepped on or rolled over by office furniture or office equipment.

Digital Key Telephone – DK-1D, DK-1S, DK-1B, DK2, DK3-D, DK3-B

- A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations.
- Connect Tip terminal with GRN terminal (screws) of the modular jack, Ring with RED.
- There is no polarity requirement on Tip and Ring.
- Single Pair (2-conductor) wiring is required for all DK series Digital Key Telephones.

CAUTION!: Avoid shorting Tip and Ring together. It may damage the TD-MBU or TD-STC board.

- **Connections to telephones are made pins 2 & 3 and pins 1 & 4.**
- A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations 1 ~ 4 of each station card.
- Connect Tip terminal with GRN terminal(screws) of the modular jack, Ring with RED
- 2-conductor wiring is required for Key Telephones.
- 2-conductor wiring is required for Single Line Telephones.
- Incorrect connections may cause a system malfunction or equipment failure.
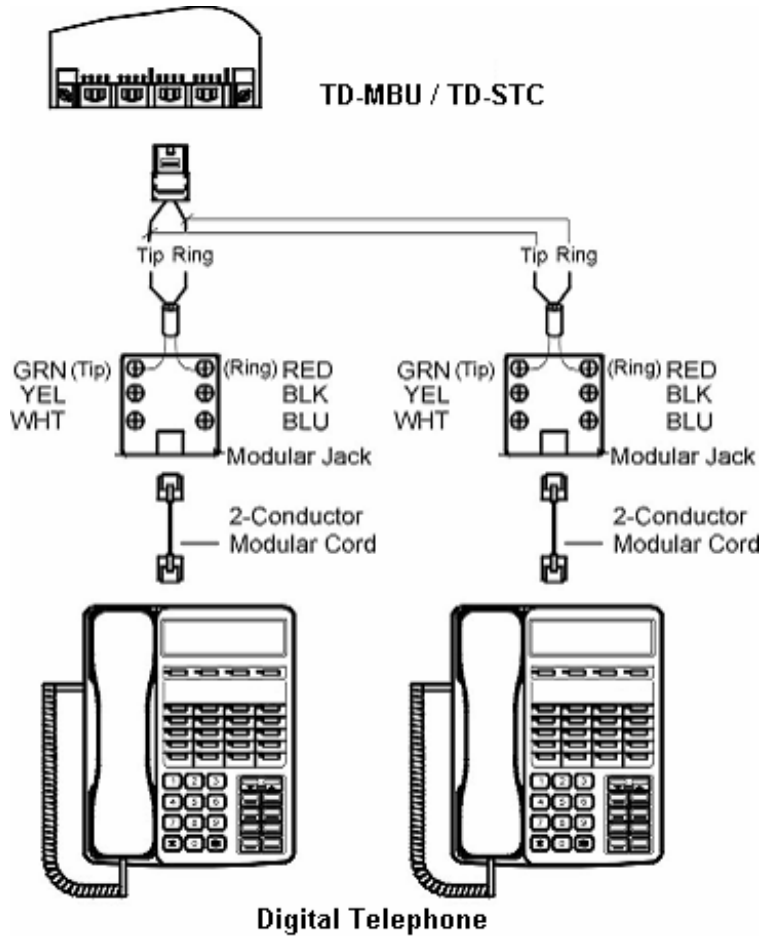
DK-1 A-B Switch

Open the overlay of the function key on the DK telephone and select the 1st or 2nd station. Dip switch to the right for the A or 1st station. Dip switch to the left for the B or 2nd station. DK2 and DK3 telephone sets change from A to B by depressing a recessed pushbutton with a paper clip or toothpick.

Access Control Phone (ACP) and Digital Doorphone Unit (DDU)

- Single Pair Wiring is required for connection to ACP/DDU phone.
- ACP/DDU Phone can be used on a digital pair with another ACP/DDU or a DK-1 telephone set.
- ACP/DDU can be either 1st or 2nd station on circuit.
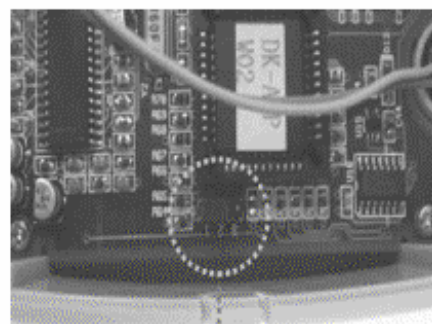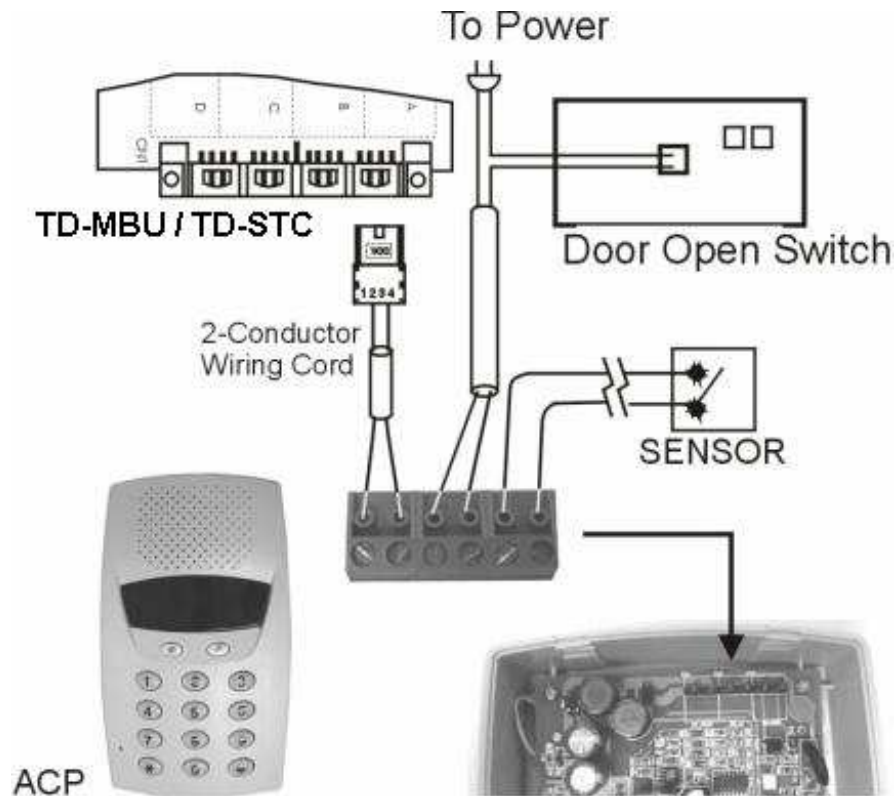
Single Line Telephone

- **Connections to telephones are made pins 2 & 3 (odd ports) and pins 1 & 4 (even ports).**
- A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations 27 – 34 (Need TD-SLC installed).
- Connect Tip terminal with GRN terminal (screws) of the modular jack, Ring with RED.
- There is no polarity requirement on Tip and Ring.
- 2-conductor wiring is required for Single Line Telephones.
- SLC-1 Cards have only two circuits and will be on equipment positions 31 and 32.
- SLC-4 Cards have 4 circuits and will be found on equipment positions 31, 32, 33 and 34.

Single Line Telephone
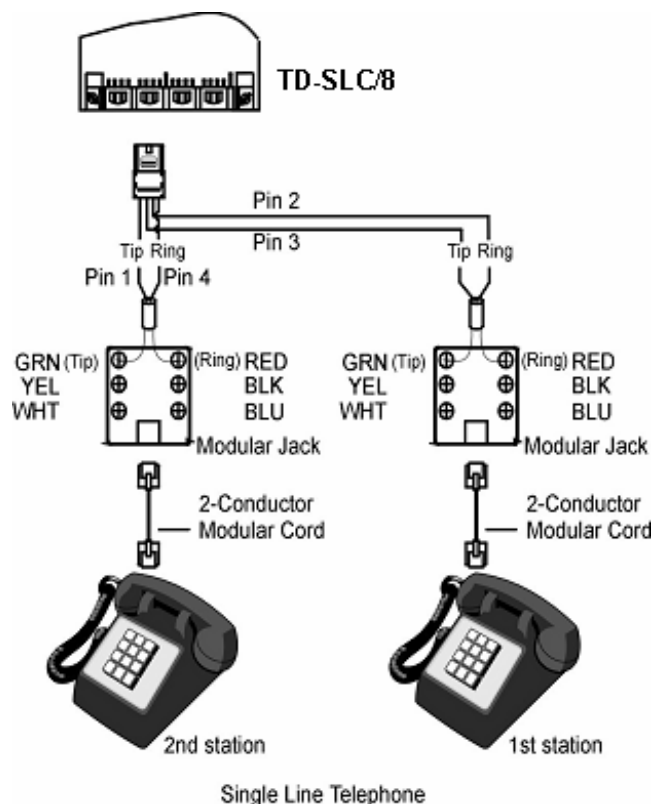
Analog Door Phone Connection

- **One Door phone may be connected to the TD-824 system and only with SLC-8 cards..**
- A cable cover is provided with the KSU. Door phone cable can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the door phone cable through the hole. Terminate the door phone wires with the connectors that are provided. The Door phone will connect to the KSU as shown on the main panel (above) on connector locations 34 (Needs TD-SLC installed).
- Connect Tip terminal with GRN terminal (screws) of the modular jack, Ring with RED.
- No polarity on Tip and Ring.
- 2-conductor wiring is required for Door phone. **Doorphone wiring is on pin 1 and pin 4 of the connector.**
- Adjust the DIP selector on the main panel to Door Phone.

Door Phone
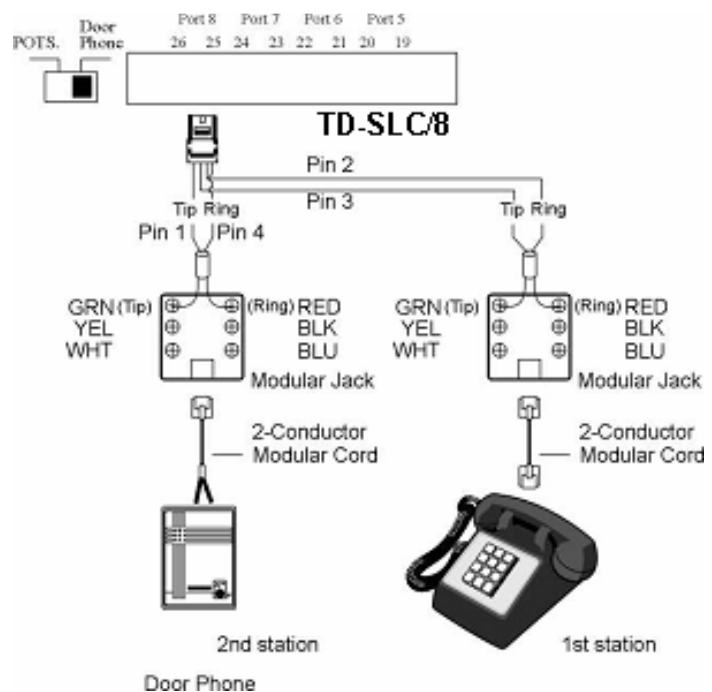
CO/PABX Connections

● Make your CO line connection to the telephone company on this connector. Pins 3 and 4 of the connector are for the CO line.
● RJ-11C (2 wire) modular connector is required.
● 2-conductor wiring is required.
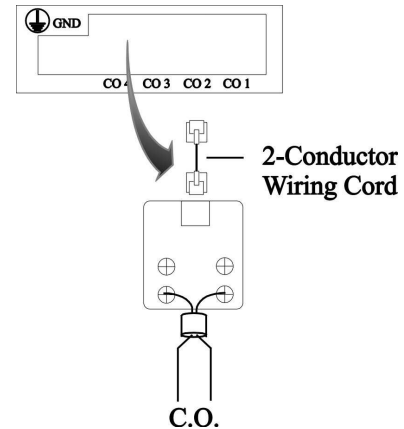
Optional Cabling

Connect a 6 conductor mounting cord from the KSU to a RJ-25 modular block.

Door Switch (Relay) Connection

● One Door Switch (24+-12VDC) may be used on the G1-824 system.
● 2-conductor wiring is required.
● Connect the door switch to pins 1 and 6 of the RJ-11 connector.

Sensor Connection

● The Sensor connector on G1-824 may be used for the External Sensor input.
● The sensor may be configured for normally open or normally closed operation.
● 2-conductor wiring is required.
● Connect the sensor to pins 2 and 5 of the RJ-11 connector.
● Refer to System Programming Form 39 -- Sensor Assignment.

Paging Connection

● The Paging connector on G1-824 may be used for an External Paging input.
● 2-conductor wiring is required.
● Connect the amplifier to pins 3 and 4 of the RJ-11 connector.
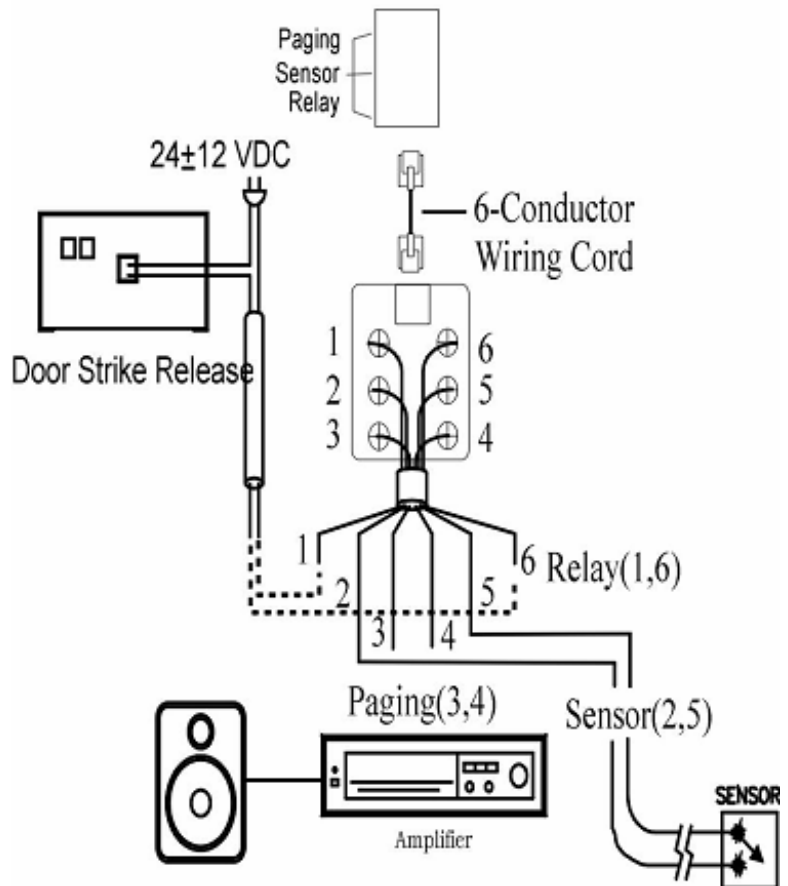
Music on Hold Connection

- Connect the (optional) external music source to the external Music" input labeled on the KSU.
- Use a 1/8" mini plug to connect the music source to the KSU.
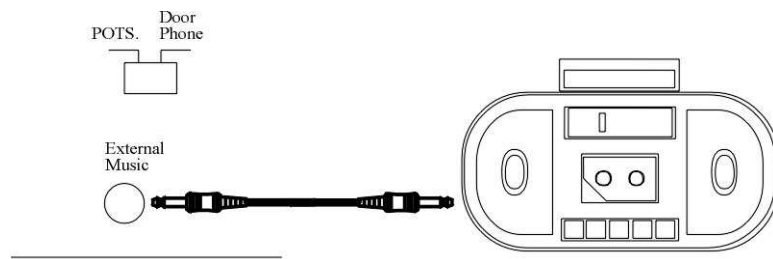
RS232 Port Connection

Use the RJ-11 connector to terminate the RS232 cable. Then connect the RJ-11 to the KSU with a 6 conductor line cord. Insert the line cord into the connector labeled RS-232.
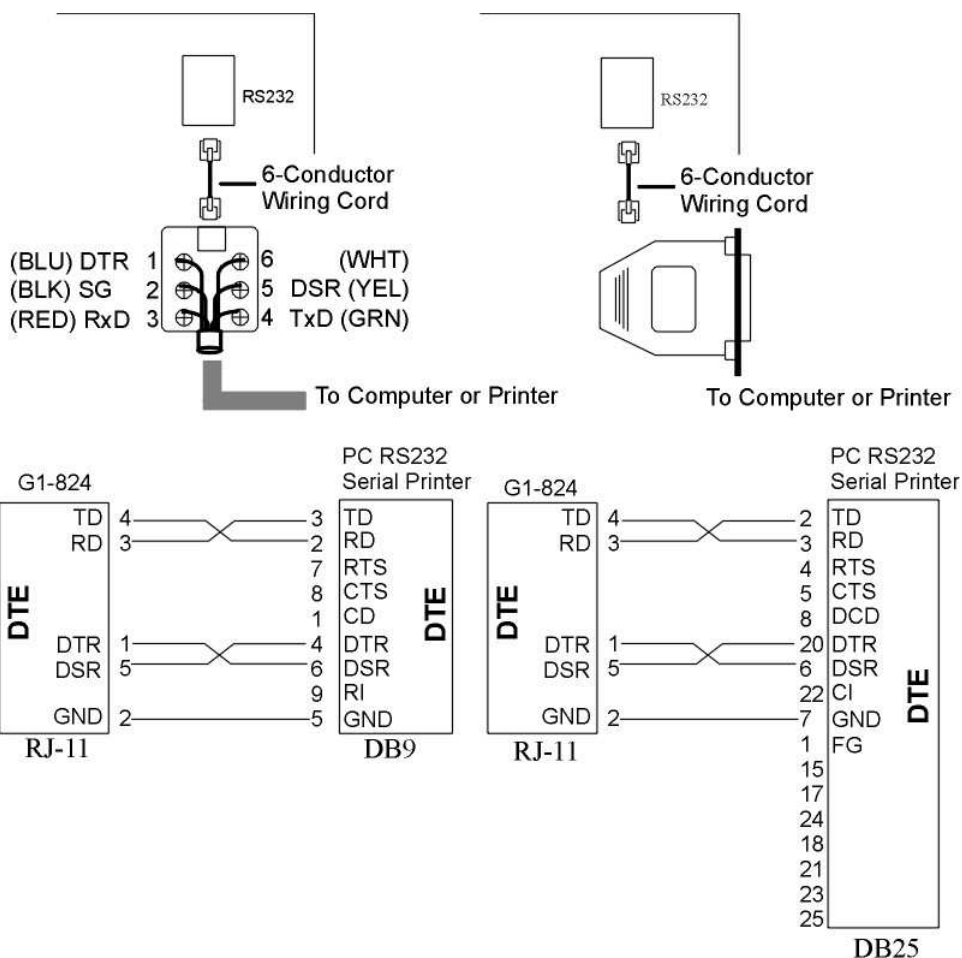
Power On and Operational Test

To AC Power

Before connecting the TD-PWU to AC power:
- Verify that input voltage and input voltage selection jumper on TD-PWU are correct before you power up the system.
- Plug the power cord into a power outlet.
- Verify the system boots properly by checking the display of a telephone set.
- You may now connect the battery back up unit if applicable.

Operational Tests

Check each telephone and CO line to verify that outgoing lines are connected properly.
Check that intercom calls can be made from extension to extension.
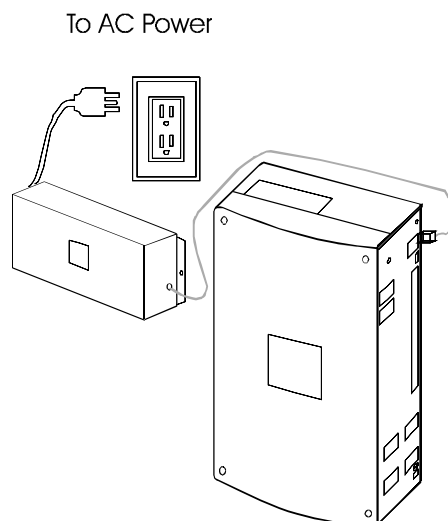
WARNING:
DISCONNECT THE POWER SUPPLY FROM THE AC POWER SOURCE BEFORE WIRING OR CHANGING ANY WIRING.

Connect the Battery Backup *AFTER* AC power has been connected to the Power Supply.
Disconnect Battery Backup *BEFORE* disconnecting AC power from the Power Supply.

NOTICE:
ONCE THE SYSTEM OPERATES PROPERLY, PROCEED TO SYSTEM PROGRAMMING. (REFER TO THE SYSTEM PROGRAMMING MANUAL.)

Series Model TD-824i - Programming Forms Manual

Programming Information
This document contains the system forms required to program the TD-824i and an explanation of the parameters.

New Systems
We recommend that all new systems have the system memory reset before system programming takes place. This ensures that any extraneous information that may be present in system memory is erased and that the system database will not be corrupt.

To Reset System Memory.

Enter System Programming :
From an LCD equipped Superkey DK Telephone Set:

1. Press [PROG]. Press [2].
2. Enter Password if programmed. (New systems will not have a system password).
3. Press [SAVE].
4. LCD display will show:

> PROGRAM MODE: __
> (01 - 93)

5. Enter [2][5]. Press [SAVE]. Display will show:

> 25- Reset Data
> 0-9 Default

6. Enter [2].
7. System Database is now reset.   LCD will display:

> PROGRAM MODE: __
> (01 - 93)

8. You may commence database entry at this point, or exit system programming by pressing SPK key or by lifting and replacing the handset.

To Enter System Programming:

1. Press [PROG]. Press [2].
2. Enter Password if programmed. (New systems will not have a system password).
3. Press [SAVE].
4. LCD display will show:

> PROGRAM MODE: __
> (01 - 93)

5. You may begin system programming at this point.

Lost Programming Key
If programming personnel accidentally delete or change the programming key (07-gp-29=FN:01), you can enter programming from DK1-D, DK-2, or a DK-3 set connected to the first port (11) of the system. To enter programming when the key has been removed:
   1. Press [SPK].
   2. Dial [7] [0] [2].
   3. Press [SAVE]. You will be in system programming (only if password has not been set).
   4. Immediately go to Form 07-01-29 and program the key to be FN:01 to restore your programming capabilities.

Basic Programming Commands:

For the first time or infrequent installer, a programming overlay is provided with each Key Service Unit. This overlay, when placed on a TransTel LCD telephone set indicates keys used during programming for easy reference. Experienced installers may program without the overlay. Both key designations are listed below.

Note: Keys listed between [ ] indicate the default keys shown on a telephone set. Keys listed between { } indicate keys displayed by the programming overlay. *See illustration Programming Overlay on the next page.*

These commands are active while in the system programming mode

[F4]{PRG} Moves to the Top Level Programming Mode Display (does not save information entered into any field unless [SAVE] is pressed first).

[F3]{SAVE} Commits the data that is showing on the LCD display into the system database.

[DSS 1]{PREV} Moves to the previous section of any multiple part form.

[DSS 2]{NEXT} Moves to the next section in any multiple part form.

[DSS 3]{LEFT} Moves the programming cursor to the left.

[DSS 4]{RIGHT} Moves the programming cursor to the right.

[DND/CN]{DON'T CARE} Enters a Wild Card (don't care) into Account Codes or Toll control entries. LCD will display d (lower case letter "d") to indicate don't care entry.

[HOLD]{PAUSE} Inserts a Pause when programming a Speed Dial Entry or for Voice Mail Programming. LCD will display p (lower case "p") to indicate a Pause entry.

[TRF/FL]{FLASH} Enters a FLASH command as part of a Speed Dial Entry. LCD will display F (upper case "F") to indicate a Flash command. Clears a digit during other entries (Passwords, etc).

[MSG]{Pφ T} Enters a command to convert from pulse dialing to DTMF dialing into a Speed Dial Entry. LCD will display T (upper case "T") to indicate a tone conversion command.

[MIC/AT]{CHANGE} CHANGE key. Depending on form, it will cycle through available Programming parameters.

[TRF/FL]{CLR DIGIT} Enters a FLASH command as part of a speed dial number. Clears a digit during other entries (Passwords, etc).

[SPK]{EXIT} Exits Programming. Returns telephone to normal idle mode.

[REDIAL]{CLR ALL} Clears all digits on an entry such as speed dial or account codes.

Alphanumeric Entry:

The following table indicates the capabilities of the name programming functions if they are selected on the system. System Speed Dial, Personal Speed Dial, Stations, CO Lines and Sensors may be programmed with names.

Key 1 =	(Blank Space) - 1	Key 2 =	A - B - C - 2
Key 3 =	D - E - F - 3	Key 4 =	G - H - I - 4
Key 5 =	J - K - L - 5	Key 6 =	M - N - O - 6
Key 7 =	P – Q - R - S - 7	Key 8 =	T - U - V - 8
Key 9 =	W - X - Y – Z - 9	Key 0 =	(Period). : & 0
Key # =	( ) $ #	Key * = (Dash)	/ ! *
DSS Key 1 =	Backspace Cursor (Left)	DSS Key 2 =	Cursor Forward

If an entry is made that is not within valid system parameters, the Superkey system will not accept the entry when [SAVE] is pressed. The Speaker on the programming set will return a busy tone and the LCD Display will place the programming cursor under the offending entry. You may make corrections and press [SAVE] again. If multiple errors are made, the system will continue to return you to the illegal entries as others are corrected.
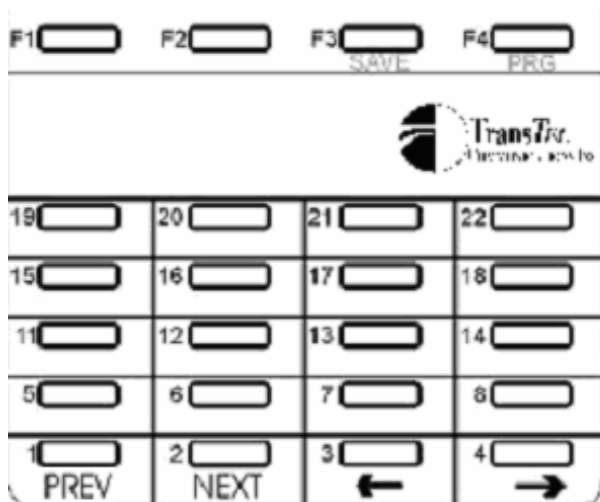
It is not necessary to re-enter existing information on a multi-item form. You need enter only the information that is to be changed. You may move the cursor to the left or right in order to access only the specific entry that you want to change.   You may press {SAVE} without regard for the placement of the cursor on the LCD display.
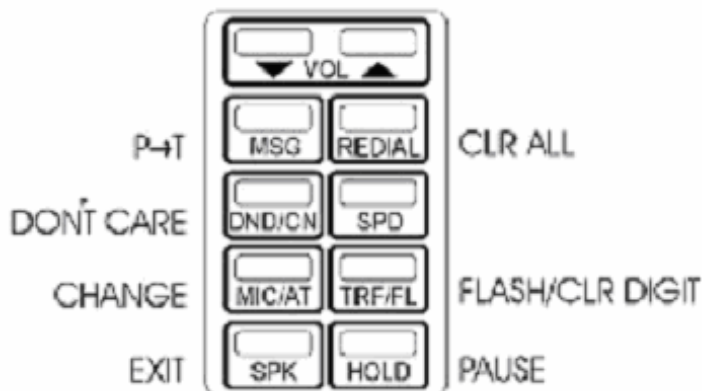
Programming Overlays

Form 01 - Day Ringing and Ringing Line Preference Assignment																
Ring Type : Linear / Circular / Hunt / Private / Common (See Form 35-CO-07)																
(Line 1) 01-01-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 2) 01-02-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 3) 01-03-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 4) 01-04-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 5) 01-05-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 6) 01-06-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 7) 01-07-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 8) 01-08-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																

General:
This program assigns each incoming line to ring the programmed stations. The ringing methods can be LINEAR, (ring the first available station), CIRCULAR (Ring the next station following the last station who just answered an incoming call), HUNT (Ring the first assigned station for a set period of time (program mode 05-08-01) then if no answer ring the next ring assigned station then the next etc.) or COMMON AUDIBLE (All stations will ring simultaneously). See Program Mode: 35-tk-07 to assign.

Description:
1. This program sets Day Time ringing.
2. The station number can be 2,3,4 digits.
3. A total of 16 stations can be assigned to ring for each trunk.
4. If the location is to be assigned to no station, the location value is set to " 0 ".
5. To clear all entries press **[REDIAL]**.

Any station programmed on a line will immediately be connected to it when the handset is lifted or the speaker button is pressed. It also controls ringing assignments as per form 35-CO-07 (Linear, Circular, Private, Common). The total number of stations that will ring is determined by Form 29-CO-05.

Example:
> IF stations 11 through 18 are programmed on Form 01-01,
> AND Form 35-CO-07 is programmed as 0,
> AND Form 29-CO-05 is programmed as 2,
> THEN Incoming calls on line 1 will ring ON Extensions 11 and 12 only, but any station
> will be directly connected to an incoming call if they lift the handset or press the speaker button.

Form 02 - Night Ringing and Ringing Line Preference Assignment

Ring Type : Linear / Circular / Hunt / Private / Common (See Form 35-CO-08)

(Line 1) 02-01-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 2) 02-02-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 3) 02-03-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 4) 02-04-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 5) 02-05-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 6) 02-06-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 7) 02-07-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																
(Line 8) 02-08-	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Extension																

General:
This program assigns each incoming line to ring the programmed stations at night. The ringing methods can be LINEAR (ring the first available station), CIRCULAR (Ring the next station following the last station who answered an incoming call), HUNT (Ring the first assigned station for a set period of time (program mode 05-08-01) then if no answer ring the next ring assigned station then the next etc.) or COMMON AUDIBLE (All stations will ring simultaneously). See Program Mode: 35-tk-08 to assign.

Description:
1. This program sets Night Time ringing.
2. The station number can be 2,3,4 digits.
3. A total of 16 stations can be assigned to ring for each trunk.
4. If the location is to be assigned to no station, the location value is set to 0.
5. To clear all entries press **[REDIAL]**.

Any station programmed on a line will immediately be connected to it when the handset is lifted or the speaker button is pressed. It also controls ringing assignments as per form 35-CO-08 (Linear, Circular, Private, or Common). The total number of stations that will ring is determined by Form 29-CO-05.

Example:
IF station 11 is the only station programmed on Form 02-01,
AND Form 35-CO-08 is programmed as 0,
AND Form 29-CO-05 is programmed as 1,
THEN Incoming calls on line 1 will ring ON Extensions 11 only AND only extension 11 will be directly connected to an incoming call when he lifts the handset or presses the speaker button.

Form 03 - Door Phone Ringing Assignment Form								
03 – 01 -	01	02	03	04	05	06	07	08
Extension								

General:

This program assigns the door phone to ring the programmed stations. If the only entry on form 03-01-01 is 99, then all phones will ring.

Description:

1. There is one door phone port available in the TD-824i.
2. Eight stations can be assigned to ring for the door phone.
3. To clear all entries press **[REDIAL]**.
4. Door phone ringing time is set in Mode 05-11-07.
5. Door Relay Unlock Time is set in Mode 05-12-04.
6. Door phone Ringing frequency is set in Mode 05-03-08.

A Door phone can be programmed to ring up to eight telephone sets. The first station to answer a call from a Door phone is automatically connected to the Door phone and all other stations are excluded from the conversation.

Note: Door phones may not be connected to outside telephone lines. They may not be involved in any station conference. They may not be transferred.

Any station can contact the Door phone by dialing 88 for Door phone

Software versions G1-A10m and earlier
Single Line circuits cannot activate the open door relay on the MSC.

Form 04 - Console Assignment Form									
Console Group __01					Console Group __02				
04 – 01 -	01	02	03	04	04 – 02 -	01	02	03	04
Extension					Extension				
Console Group __03					Console Group __04				
04 – 03 -	01	02	03	04	04 – 04 -	01	02	03	04
Extension					Extension				
Console Group __05					Console Group __06				
04 – 05 -	01	02	03	04	04 – 06 -	01	02	03	04
Extension					Extension				
Console Group __07					Console Group __08				
04 – 07 -	01	02	03	04	04 – 08 -	01	02	03	04
Extension					Extension				

General:

This program permits the selection of the consoles in each station group.

Description:

1. There are 8 console groups available.

2. A total of four stations can be set to be the console in each group.

3. The first assigned station is the master console.

4. To clear all entries press **[REDIAL]**. Do this in ALL unused groups.

5. It is recommended that only one console is used per group.

Extension numbers can be put in to determine what stations will be considered system Operators. Extension numbers that appear in a group will ring when another station in the same group Dials 0. When a station dials 0, the routing is controlled by the setting of Form 41-Station-01. Please see Form 41 for more information.

System Default has Group 01 programmed with Extensions 11, 12, 13, and 14 as system consoles.

Form 05-01 - System Parameters Form - Timers-1 G1-a20m G1-a20t								
Form 05-01-	01	02	03	04	05	06	07	08
Range of Entries	0-9	0-9	0-9	0-9	0-9	0-9	0-9	0-9
Default Value	1	1	1	1	4	2	2	1

Item	Valid Settings	Description	Default
05-01-01	0-9	Hold Recall Time	1=60 Sec
05-01-02	0-9	Exclusive Hold Recall Time	1=60 Sec
05-01-03	0-9	Hold Recall Timeout	1=60 Sec
05-01-04	0-9	DISA Access Delay Day Service[G1-a20m]	1=2 Sec
05-01-05	0-9	Busy Remind Cycle Time [G1-a20t]	4=8 Sec
05-01-06	0-9	Pause Time	2=800 Ms
05-01-07	0-9	DTMF Generation Time	2=83 Ms
05-01-08	0-9	Call Forward No Answer TRF. Time	1=20 Sec

05-01-01. Hold recall time:

This parameter sets the time duration from when Hold is initiated to when the held call starts to ring (recall) the station.

After a pre-determined recall time (see 05-01-03: Hold Recall Timeout), if the station still does not answer, the hold call will automatically transfer to the Console.

05-01-02. Exclusive Hold recall time:

This parameter sets the time duration from when Exclusive hold is initiated to when the held call starts to recall the station.

After a pre-determined recall time (see 05-01-03: Hold Recall Timeout), if the station still does not answer, the held call will recall to the Console in addition to the holding station.

05-01-03. Hold Recall Timeout:

This parameter sets the time between a call recalling to a holding or transferring station and then recalling to the console if unanswered.

See Values below for these timers.

0=30 seconds	1=60 seconds	2=90 seconds	3=120 seconds	4=150 seconds
5=180 seconds	6=210 seconds	7=240 seconds	8=253 seconds	9=No recall

05-01-04. DISA Access Delay Day Service:[G1-a20m]

This parameter sets the time duration that a DISA trunk will ring prior to connection to return dial tone or VSC message. (Stations can answer during this time.)

       0 = Automatic connection, no ring to the stations.

      1-8 = Automatic connection after 2-254 seconds ringing as listed below.

Pre: G1-a20m this option controlled the DISA Delayed Answer Timer during both Day Service and Night Service.

Version G1-a20m and newer: DISA delayed answer timer has day/night mode

    The DISA answer delay reference 05-01-04 in day service.

    The DISA answer delay reference 05-11-04 in night service.

0=0 second	1=2 seconds	2=4 seconds	3=6 seconds	4=8 seconds
5=15 seconds	6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds

---

05-01-05. Busy Remind Cycle Time (Off-Hook Ringing): [G1-a20t]

This parameter selects the length of time an incoming trunk call rings the system before a busy ring assigned station is reminded of the call. A muted, one-second ring will be given to the station through the speaker to indicate the call. The tone will be repeated every busy remind time interval.

This parameter also sets the timing for the SLT Camp-On feature (see Mode 05-08-03 to extend timing for SLT Camp on tone) and the camp on tone for key stations.

Added G1-a20u: This parameter also controls the frequency of Caller ID display for new incoming calls while the caller is on an existing call.

0=0 seconds	1=2 seconds	2=4 seconds	3=6 seconds	4=8 seconds
5=15 seconds	6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds

---

05-01-06. Pause Time:

This parameter sets the system pause time duration for speed dial entry, trunk access time and voice mail call forwarding tone delay..

0=400 ms.	1=600 ms.	2=800 ms.	3=1000 ms.	4=1200 ms.
5=1400 ms.	6=1600 ms.	7=1800 ms.	8=2000 ms.	9=2200 ms.

05-01-07. DTMF Generation Time:

This parameter permits the selection of DTMF Generation output time. The generation time may need to be lengthened to access some Voice Mail or answering machines.

0=48 ms.	1=64 ms.	2=80 ms.	3=100 ms.	4=114 ms.
5=132 ms.	6=156 ms.	7=164 ms.	8=180 ms.	9=196 ms.

05-01-08. Call Forward No Answer Transfer Time:

This parameter sets the duration between calling a station which has set call forward no answer, and the transfer of the call to the station to which it has been forwarded.

0=10 seconds	1=20 seconds	2=30 seconds	3=40 seconds	4=50 seconds
5=60 seconds	6=70 seconds	7=80 seconds	8=90 seconds	9=100 seconds

Form 05-02 - System Parameters Form - Timers-2

Form 05-02-	01	02	03	04	05	06	07	08
Item								
Range Of Entries	0-9	0-9	0-9	0-9	0-9	0-9	0-9	0-9
Default	5	5	1	8	4	3	2	6

05-02-01. SLT Dial Tone Timeout:

This parameter is for Single Line Telephones. If a key is not pressed before the assigned time period expires when Dial Tone is given, a Busy Tone will be heard and the DTMF receiver will be released.

05-02-02. SLT Inter-Digit Timeout:

This parameter is for Single Line Telephones. If the interval between digits dialed exceeds the assigned time period, a Busy Tone will be given and the DTMF receiver will be released.

0=0 second	1=2 seconds	2=4 seconds	3=6 seconds	4=8 seconds
5=15 seconds	6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds

05-02-03. Auto Redial Ringing Time – CO lines:

This parameter is the time duration for which the system will redial the telephone number automatically and then hang up during Auto Redial on CO lines. ISDN lines will hang up immediately if the called number is busy.

Off Hook		Auto-Redial Pause Time (Program 05-05-08), Y seconds		**Off Hook**	
Auto-Redial Ringing Timer		On Hook		**Auto-Redial Ringing Timer**	
0=1 second	1=10 seconds	2=20 seconds	3=30 seconds	4=40 seconds	
5=50 seconds	6=60 seconds	7=70 seconds	8=80 seconds	9=90 seconds	

05-02-04. SLT Release Signal:

This parameter is the time duration of depressing the hook switch of an SLT that the system will see as a hang up, the system will take it as a hold signal if less than this time but longer than the SLT hook flash time.

0=40 ms.	1=80 ms.	2=120 ms.	3=400 ms.	4=600 ms.
5=800 ms.	6=1000 ms.	7=1200 ms.	8=1400 ms.	9=1600 ms.

05-02 05 - Key Telephone Flash Timer (ms. = milliseconds):

This parameter permits the selection of Flash time for Key stations when pressing the **[TRF/FL]** key or an analog phone which presses flash and then dials 800 while connected to an outside line. After dialing 800 the flash signal will be sent to the CO line and the analog phone will reconnect to the line

0=80 ms.	1=120 ms.	2=200 ms.	3=280 ms.	4=440 ms.
5=640 ms.	6=840 ms.	7=1040 ms.	8=1240 ms.	9=1440 ms.

05-02-06. SLT Hold Signal:

This parameter permits the selection of the Flash time from a single line telephone that the system will see as a Hold signal if the time is greater than the hold signal but less than the SLT release time.

DURING CONVERSATION	HOOK PRESSED-Period B		HOOK RELEASED	
	Period **B <** SLT Release Time		**Hold**	
DURING CONVERSATION	HOOK PRESSED-Period B			HOOK RELEASED
	Period **B >** SLT Release Time			**Hang Up**

0=64 ms.	1=80 ms.	2=104 ms.	3=200 ms.	4=304 ms.
5=400 ms.	6=512 ms.	7=600 ms.	8=704 ms.	9=800 ms.

05-02-07 - Minimum Ring Detection (Ring On) Timer (ms. = milliseconds): Minimum ring burst that must be present for the system to detect an incoming call.

0=0 ms.	1=160 ms.	2=240 ms.	3=360 ms.	4=440 ms.
5=560 ms.	6=640 ms.	7=760 ms.	8=840 ms.	9=960 ms.

05-02-08 - Ring Cycle (Ring Off) Timer: Length of time that the system must have **without** a ring signal for the system to stop internal ringing (abandoned calls).

0=2 seconds	1=2 seconds	2=2 seconds	3=3 seconds	4=4 seconds
5=5 seconds	6=6 seconds	7=7 seconds	8=8 seconds	9=9 seconds

Form 05-03 - System Parameters Form - Codes-1								
Form 05-03-	01	02	03	04	05	06	07	08
Code								
Range Of Entries	0 - 1	0 - 1	0 - 1	0 - 9	0 - 9	2 - 4	0 - 1	0 - 9
Default	1	0	0	9	0	2	0	9

05-03-01 - Pulse Dial - Make / Break Ratio Dial Pulse Ratio:

This permits the selection of a Make/Break Ratio for Dial Pulse signaling

0=33/67	1=40/60

05-03 02 - Automatic CO Line Search During Speed Dial, Auto Redial, Saved Redial, etc:

This allows the system to search for an available trunk according to the assigned dial 9 trunk group when automatic dialing features are used; i.e., Speed Dial, Save Redial, Redial, etc.

0=Enabled (Allowed)	1=Disabled (Not Allowed)

05-03 03 -Intercom Call Signaling to Electronic Telephone Set:

This selects the Intercom calling method. The user can still override this selection by dialing 3 after initiating an intercom call. Individual stations can be set to automatic microphone switch-on in mode 46-st-03 and thus override the system wide ring method.

0=Voice Signaling	1=Ring Signaling

05-03-04 - PABX (Centrex) Outgoing Code (Reference Form 35-CO-01):

This parameter assigns the PABX outgoing call access code for Redial and Save Redial when the system is installed behind a PABX.

It is used only when Trunk Lines are set to be PABX lines in Mode 35-TK-01.

This assignment also enables the system to identify whether the user's dialing is a PABX's Intercom call or an Outgoing call for toll restrictions.   *(Refer to Program 35-TK-01)*

0=0	1=1	2=2	3=3	4=4
5=5	6=6	7=7	8=8	9=9

05-03-05 - Toll Access Code:

The first digit that is checked for verification of a toll call. *This has no effect on toll restriction within the system*. It is only used to notify SMDR that a particular call is a toll call. See Form 14-01-03.

In the United States, this parameter (if used) will generally be set to 1.

0=0	1=1	2=2	3=3	4=4
5=5	6=6	7=7	8=8	9=9

05-03-06 - Station Number Digit Length:

This assigns the number of digits used for the station numbering plan. 2, 3, or 4 digits may be used. In the TD-824i the system will set this parameter to 2 digits automatically at the time of system initialization

2=2 digit length	3=3 digit length	4=4 digit length

05-03-07 - SLT Dial Tone Options:

This parameter assigns the pattern of intercom dial tone and other "off hook" tones within the system.

Setting	ICM Tone	DND Tone	CFWD Tone	MSG Tone
0	Continuous	Special	Special	Continuous
1	Interrupted	Special	Special	Interrupted
2	Continuous	Continuous	Continuous	Continuous
3	Interrupted	Interrupted	Interrupted	Interrupted
4	Continuous	Special	Special	Interrupted
5	Interrupted	Special	Special	Continuousl
6	Continuous	Continuous	Continuous	Interrupted
7	Interrupted	Interrupted	Interrupted	Continuous
Continuous = Normal Dial tone		Interrupted = Normal Busy Tone		Special = Three Short Beeps

05-03-08 -Doorphone Ringing Frequency:

This parameter allows for different ring patterns for the Door Phone

0= continuous ringing	1~8 = ring frequency of the DK telephone	9= Background Music

Form 05-04-	01	02	03	04	05	06	07	08
Item								
Range of Entries	0	0 - 1	0 - 2 5 - 7	0 - 1	0	0 - 4	0 - 1	1 - 2
Default	1	1	0	0	0	1	0	1

Form 05-04 - System Parameters Form - Codes-2 [G1-a20u]

05-04-01 – RS-232 Baud rate:

This paramter controls the output speed of data from the system.

0=1200bps	1=2400bps	2=3600bps	3=4800bps
4=9600bps	5=19200bps	6=38400bps	7,8,9=56000bps

05-04-02 - Dial 9 (Hybrid) Activation Turns on Dial 9 (pooled CO lines):

This parameter sets if a station can access an outgoing line by dialing 9. If this parameter is disabled the station can still access an outgoing line by pressing a line key

0=Dial 9 access Disabled	1=Dial 9 access Enable

05-04-03 – Call Limit Type:

This parameter decides what action will be taken if a station has limit call duration enabled in Mode 40-nnnn-03. Settings 0 to 3 are for outgoing calls only. The outside party will also hear the warning tone.

0=Continuous Warning After Timeout (Outgoing).
1=1 Second Warning at Duration Limit (Outgoing).
2=1 Second Tone 10 seconds Prior to Timeout. Continuous Tone 5 seconds prior. Line is released at Timeout (Outgoing).
3 =1 Second Tone 60 seconds Prior to Timeout. Continuous Tone 30 seconds prior.
4= immediate disconnect[G1-a10an]
5=Same as 0 above, except affects both Incoming and Outgoing.
6=Same as 1 above, except affects both Incoming and Outgoing.
8=Same as 3 above, except affects both Incoming and Outgoing.
7=Same as 2 above, except affects both Incoming and Outgoing.

05-04-04 - Time Format Display:

0=12 Hour Clock (AM/PM)	1=24 Hour Clock 00:00-23:59

05-04-05- SLT Ignore Flash Timer:

This parameter is used for certain single line telephones that need to be "debounced" when the station goes off hook. When a station goes off hook, the system will ignore any flash from the telephone until this timer expires. **This option generally will not be used in North America.**

0=No delay	1=1 second delay	2=2 second delay	3=3 second delay	4=4 second delay
5=5 second delay	6=6 second delay	7=7second delay	8=8second delay	9=9second delay

05-04-06 - Speed Dial Distribution:

This parameter sets the number of speed dial numbers allocated to the system speed dial. Adding extra numbers to system Speed Dial reduces the number of personal Speed Dial numbers available to share between individual stations

Numbers after backslash indicate sets available with name feature enabled.

	System	Personal		System	Personal
0	100 Sets	500/200 Sets	3	400/300 Sets	200/000 Sets
1	200 Sets	400/100 Sets	4	500/300 Sets	100/000 Sets
2	300 Sets	300/000 Sets			

05-04-07 - Intercom Single Digit Dialing:

Single digit intercom allows the stations to call up to 5 other stations by dialing one digit only (1 to 5). This feature is for the Hotel / Motel Environment. Up to eight different groups may be programmed. If a group is not programmed with any entries then stations which are in the same number station group will be able to make intercom calls without dialing the room to room dialing prefix (6).

0=Disabled	1=Enabled

05-04-08 - Message Waiting (MW) Status for Single Line Phones: [G1-a20u]

If the setting is Ring, the single line phone will receive 30 seconds intercom ringing every 5 minutes until the station answers.

If the setting is Voice Message, the station which is left a message will hear the voice message which is stored by the console after answering the message waiting.

If the setting is 250 ms. ring the analogue phone will receive two 250 ms. ring burst every 5 minutes. This is for use with the special telephones to turn on message lamp.

0= 90V Message Waiting Lamp [G1-a20u]	
1=MW Ring - Route recipient to message originator. (Day and Night)	2=MW - Route to VSU. (Day and Night)
3=250 millisecond ring every 5 minutes. (Day and Night)	4=No MW during Night Service

Form 05-05 - System Parameters Form - Codes-3								
Form 05-05-	01	02	03	04	05	06	07	08
Item								
Range of Entries	0 - 1	0	0 - 6	0 - 9	0	1	0 - 9	0 - 9
Default	1	0	0	0	0	1	1	0

05-05-01 – Wake Up Call Signaling:

This parameter is for the Hotel/Motel environment to decide what an extension will hear upon receiving a wake up call.

Each station can be set in Mode 44-st-08 to decide whether to hear Background Music or DND tone

0=VSU (requires Voice Service Unit)	1 = Back-ground music or DND tone.
2 = VSC + Record Wake Up Call History via SMDR	3 = Back-ground music or DND tone + Record Wake Up Call History via SMDR

05-05-02 – Reserved:

05-05-03 – Speed Dial Unrestricted (Hundreds Group):

If 05-05-03, 05-05-04 settings are A, B, then the speed dial codes from 100 to AB0 are not toll restricted. For example if the settings are 1 and 1 then Speed dials up to 110 can be used by stations whether they conflict with toll restrictions or not. Individual stations can be restricted from using this feature in Mode 45-st-07.

If 05-05-03, 05-05-04 settings are set to 0, 0, then all speed dial codes are toll restricted if the station using the speed dial is restricted.

0=000	1=100	2=200	3=300	4=400	5=500	6=600	

05-05-04 - Speed Dial Unrestricted (Tens Group): See 05-05-03 above						0=00	1=10
2=20	3=30	4-=40	5=50	6=60	7=70	8=80	9=90

05-05-05 - Name Function:

This parameter enables the naming feature for trunks, extensions and speed dials.

Features \ Values	0	1	2	3	5	7
Display Name instead of number for Extension		X		X	X	X
Directory Dial for Speed Dial			X	X		X
Directory Dial for Extension					X	X

X: The feature is enabled.

Note 1: When any of the above features are enabled the total number of speed dial sets will be reduced by 300. See Mode 05-04-06.

Note 2: For setting name for Extension/Speed dial/Trunk, Please refer to the programming mode 43 / 09 /35.

Note 3: For setting "Directory Dial" key, Please refer to mode 07.

0=No Names Used	1=Display Names for Extensions
2=Name Speed Dial. (Allow Dial by Name Speed Dial only)	3=Name Extensions & Speed Dial (Dial by Name)
5=Name Display and Dial by name for Extensions only	7=Enable Name display and speed Dial. Enabled Dial by name for Extensions and Speed Dial

---

05-05-06 – Dial Tone Detector:

If setting is enable, then the system will send out the dialing signals after the system detects the Dial Tone which is sent from the exchange, if dial tone is not detected by the system then dialing signals will not be sent out. If setting is disable, then the system will send out dialing signals whether Dial Tone is detected or not.

0 = Enable	1 = Disable

05-05-07 – Auto Redial Attempts:

This parameter is to set the number of auto redial times which the system will attempt.

0=Disabled	1=3 Attempts	2=6 attempts	3=10 attempts	4=20 attempts
5=30 attempts	6=40 attempts	7=50 attempts	8=60 attempts	9=70 attempts

---

05-05-08 - Auto Redial Inter-Call Timer (seconds):

This parameter is the time duration between the system hanging up an auto redial attempt and starting to redial automatically

.

Off Hook		Auto-Redial Pause Time (Program 05-05-08), Y seconds	Off Hook	
Auto-Redial Ringing Timer		**On Hook**	Auto-Redial Ringing Timer	
0=10	1=20	2=30	3=40	4=50
5=60	6=70	7=80	8=90	9=100

Form 05-06 - System Parameters Form - Timer/Codes								
Form 05-06-	01	02	03	04	05	06	07	08
Item								
Range Of Entries	0 - 9	0 - 9	0	0 - 1	0 - 1	0-9	0, 1, 3	0
Default	4	4	0	1	0	3	0	0

05-06-01 - Transfer Recall Timeout-Busy (seconds):

This parameter sets the time duration between transferring a call to a busy party and automatic transfer back to the transferring party when the called party remains busy

0=5	1=10	2=15	3=20	4=30
5=40	6=50	7=60	8=70	9=No Recall

05-06-02 - Transfer Recall Timeout-No Answer (seconds):

This parameter sets the time duration between transferring a call to a station and automatic transfer back to the transferring party when the called party does not answer.

0=5	1=10	2=15	3=20	4=30
5=40	6=50	7=60	8=70	9=No Recall

05-06-03. ISDN Audio:

This parameter sets ISDN Audio type.

0 = a law	1 = u law

05-06-04 - Polarity Reverse Detection:

This parameter is to enable the Polarity Reversal detection feature for incoming caller hang up detection in Australia and some European countries. See Mode 14-01-08 for SMDR setting. Telecom will need to enable polarity reversal at the exchange. When reversal is enabled the system will hang up the exchange line when the incoming caller hangs up and the exchange sends a reversal to the system.

     0 = Disable
     1 = Enable for 1 polarity reverse signal
     2-9 = Delay for 1-8 Seconds and then detect Polarity Reverse Signal

0=Enable	1=Disable

05-06-05 - Operator Access Code:

This parameter is to set whether to dial "0" or "9" for the operator or for accessing a CO. line.

0 = 0 Operator - 9 Outside Line	1= 9 Operator - 0 Outside Line

05-06-06 -CO Disconnect Timer for ECF, Unsupervised Conference, and DISA:

This parameter sets the time that the system will allow an Unsupervised Conference or External Call Forward to continue before sending a warning tone to the parties and then disconnecting the call. If either party sends a DTMF digit (0-9) to the system the timer will reset and allow the call to continue for the time setting. If reversal supervision is used it will override this setting.

0=Disable	1=1 minute	2=2 minutes	3=3 minutes	4-9=4 minutes

05-06-07 - Single Line Telephone Hold Procedure:

This parameter is to set whether Single Line Telephones use [FLASH] (or [Hook-switch]) or [FLASH, 7] (or [Hook-switch, 7]) to place a call on Hold.

0=Flash only	1 +[7=Flash]	3=Flash +[7] (System returns tone after Flash)

05-06-08 - Station Hunting Group Ring Method:

This parameter sets the ring method used in the station hunting groups. Pilot numbers for hunt groups are set in Mode 67 and Day/Night ring stations are set in Mode 68 & 69. This system wide parameter can be overridden by programming in Form 67-GP.

0 = Common	1 = Linear	2 = Circular

Form 05-07 - System Parameters Form - Timer/Codes [G1-a20u]								
Form 05-07-	01	02	03	04	05	06	07	08
Item								
Range of Entries	0 - 1	0 - 1	0	0 - 1	0 - 7	0 - 9	0	0
Default	0	0	0	0	0	0	0	0

05-07-01 - Intercom Step Call:

If setting is enable, when calling an internal station which is busy or does not answer, pressing [4] will call the station on the next port which is in the same station group as the called station. If setting is disable then there will be no transfer.

0=Disable	1=Enable on Busy
2=Enable on No Answer	3=Enable on Busy and No Answer

05-07-02 - SLT Calling Proof:

In areas where dial tone from the CO is delayed, this option will disallow dialing before dial tone is available. If dial tone is delayed, SLT users may attempt to bypass toll control by dialing a DTMF digit before dial tone is available. Enabling this option causes toll checking to not occur until dial tone is heard on the CO trunk. If digits are dialed before dial tone is available, they are disregarded by the TD-824i.

0=Disable	1=Enable

05-07-03 – Splash Tone On Page: [G1-a20u]

This option enables or disables the splash tone that is heard at the beginning of a page. Please note, this option only affects key telephones. Single line sets will always cause a splash tone prior to paging. Default is 0 = enabled

0= Splash Tone Enabled	1=Splash tone Disabled

05-07- 04 - DISA Operator Recall Capability (No Digits Dialed):

Setting	Situation		
	No dialing after the first voice announcement from the VSU.	**The VSU has announced that the called station is busy or no answer**	**The VSU has already announced the invalid number or a dialed number that has not been received completely.**
0=	*	*	*
1=	**T**	*	*
2=	*	**T**	*
3=	**T**	**T**	*
4=	*	*	**T**
5=	**T**	*	**T**
6=	*	**T**	**T**
7=	**T**	**T**	**T**
Note	"*" = Transfer the incoming call to console **"T"**=System will announce VSU function 06 (if programmed) to the incoming call if no digits dialed timer has expired. System releases call (hangs up).	**"*"**=See Form 46-ST-04 **"T"**=See Form 46-ST-04. If 46-ST-04 is no recall to operator, VSU function 06 will be played to the caller (if programmed). System will release call (hang up).	**"*"**= System will transfer incoming caller to system operator if 05-08-07 has expired. **"T"**=System will play VSU function 06 (if programmed) to the caller if 05-08-07 has expired. System will release the call (hang up).

05-07-05 - DK Calling Proof

If the setting is enabled, then no audio will be sent from the handset until 3 digits are received by the KSU from the key station dial pad. The intent of this option is to prevent the use of external dialing devices in order to bypass existing toll restrictions. This parameter will be automatically disabled on any lines which are set to Pulse dial.

0=Disable	1=Enable

05-07-06 - SMDR Dialed Number Print If setting is "0", then the full length of the telephone number will be output to the SMDR. If setting is n, then the length of the telephone number will be n digits long.	0=Print All Digits	
1=Print 1st digit	2=Print First 2 digits	3=Print First 3 digits
4=Print First 4 digits	5=Print First 5 digits	6=Print First 6 digits
7=Print First 7 digits	8=Print First 8 digits	9=Print First 9 digits

05-07-07 CO Trunk Guard Timer This parameter is used to insert a pause between a line being released and being able to be re-selected for outward dialing.	0=No delay	
1=1 second	2=2 seconds	3=3 seconds
4=4 seconds	5=5 seconds	6=6 seconds
7=7 seconds	8=8 seconds	9=9 seconds

05-07-08 - Reserved

Form 05-08 - System Parameters Form - Timer/Codes								
Form 05-08-**T**	01	02	03	04	05	06	07	08
Item								
Range of Entries	0 - 9	0 - 1	0 - 9	0 - 1	0 - 8	0 - 9	0-9	0
Default	5	0	0	0	7	1	7	0

05-08-01 – Ring Hunt Interval (seconds):

If setting is n, Then when an incoming call rings the first ring assigned extension and that extension is busy, after n seconds the call will ring the second of the ring assigned extensions. If the 2nd extension is busy the call will go to the 3rd extension immediately. All stations which have been passed by the ring assignment will receive off hook busy remind. Up to 16 stations can be in the ring hunt group. If the setting is 0 then only the first ring assigned station will ring.

0=0	1=2	2=4	3=6	4=8
5=15	6=30	7=60	8=120	9=250

05-08-02 - Direct CO Access:

This feature enables or disables the ability of stations to use a DSS key to access CO lines not in their own dial 9 group.	0=Disable	1=Enable

05-08-03 – SLT Busy Remind Tone Timer:

This feature enables a tone to indicate call waiting for a busy single line telephone and sets the interval between tones. The interval between tones will be the Off Hook Busy Remind Interval (t) x by the setting in this parameter. Off Hook Busy Remind Time is set in Mode 05-01-05.

0=Disable	1=1 X Value of Form 05-01-05	2=2 X Value of Form 05-01-05
3=3 X Value of Form 05-01-05	4=4 X Value of Form 05-01-05	5=5 X Value of Form 05-01-05
6=6 X Value of Form 05-01-05	7=7 X Value of Form 05-01-05	8=8 X Value of Form 05-01-05
9=9 X Value of Form 05-01-05		

05-08-04 - DISA Operator Recall Location (No Answer):

This parameter decides to which Console group an unsuccessful DISA call will be transferred if the called station has transfer enabled in 46-st-04.

0=Console for the Called Station's group (41-st-01)
1=Console for the Incoming Trunk's group (36-gp)

05-08-05 - SLT Feature Programming Access Code First Digit:

This feature changes the programming digit used by an Analogue phone to perform its programmable features. For example call forward is normally 701, If this parameter is set to 3 the call forward code will be 301. If the setting is 0 then the analogue phones cannot do programming. If the setting is 8 it is necessary to press [*][#] before accessing programming or dialing any 8 codes. This will allow the use of digits 1 to 8 as the first digit of a station number

0=Disabled	1=1	2=2	3=3	4=4
5=5	6=6	7=7	8=[*][#][7]	

05-08-06 – DISA No Answer Recall Timer (seconds):

An incoming call is answered by the DISA voice message and transferred to the called extension. If the called extension does not answer after this time duration the voice card will announce the status of the station (no answer). Or if the station is busy will announce the status (busy) immediately and then retry the station the number of times set in Mode 05-11-06 and depending on the settings for individual stations in Mode 46-st-03 will also transfer the call to the console of the group specified in Mode 05-08-04, transfer the call to the console only or disconnect the call.

0=8	1=16	2=24	3=32	4=40
5=48	6=56	7=64	8=72	9=80

05-08-07 -DISA Transfer Time (No Digits Dialed) Transfer to Console:

This parameter sets the time that a DISA call will wait after the voice message is completed before transferring to the console if no digits are dialed by the caller. Do not set this to less than about 3 seconds for normal operation

0=Immediate	1 = 1 second	2 = 2 seconds	3 = 3 seconds	4 = 4 seconds
5 = 5 seconds	6 = 6 seconds	7 = 7 seconds	8 = 8 seconds	9 = 9 seconds

05-08-08. Music source selection:

This parameter sets the Music Source for the Internal Background Music, CO Music on Hold and the Doorphone Ring.

Set Data	B.G.M	M.O.H	Door Phone Bell
0	Melody IC	Melody IC	Melody IC
1	External Source	Melody IC	Melody IC
2	Melody IC	External Source	External Source
3	External Source	External Source	External Source
4	Melody IC	SLT music port (Form 43-st-02=7)	SLT music port (Form 43-st-02=7)
5	External Source	SLT Music port (Form 43-st-02=7)	SLT music port (Form 43-st-02=7)
6	Melody IC	DND tone	External Source
7	External Source	DND tone	External Source

Form 05-09 - System Parameters Form - Misc. G1-a10ax								
Form 05-09-**T**	01	02	03	04	05	06	07	08
I**T**em								
Range of Entries	0	0 - 1	0-9	0	0	0	0	0
Default	0	1	0	0	0	0	0	0

05-09-01 Reserved:

05-09-02 – Console Automatic Queuing:
This feature enables the busy console(s) to have an intercom call(s) queued to it(them). If the station dials the operator (by 0 or 9) and all the consoles are busy, the system will put this call in the queue to wait for the operators to be free. The calling station will hear ring back tone instead of busy tone and the first operator in the group will receive the Busy Remind Signal. The first operator to go on-hook will receive the call.

0=Disable	1=Enable

05-09-03 - CO Loop Disconnect (Calling Party Control):
This option enables Calling Party Control so that held calls that are abandoned are dropped by the system and callers who abandon while listening to voice mail do not continue processing. Calling Party Control is sent from the telco Central Office as an open loop (loop current dropped). Open loop interval is listed below in milliseconds

0=Disabled	1=80 ms	2=160 ms	3=240 ms	4=320 ms
5=400 ms	6=480 ms	7=560 ms	8=640 ms	9=720 ms

05-09-04 - DISA Busy Tone Detection:
This feature allows the system to recognize busy tone from the CO line during DISA operation for clearing down the call.
Type 1 = busy tone is 250 ms. on, 250 ms. off.
Type 2 = 500 ms. on and 500 ms. off.
Type 3 = Continuous busy tone (>3.2 seconds).
Type 4 = 375 ms. on and 375 ms. Off.

0 = Disable	1 = Type 1	2 = Type 2	3 = Type 1 and 2	4 = Type 3
5 = Type 1 and 3	6 = Type 2 and 3	7 = Type 1, 2, 3	8 = Type 4	

05-09-05 Reserved:

05-09-06 - UCD Enable Time:

This parameter is to set the time duration before the system answers an incoming call when the ring assigned station(s) are busy, if a VSC card is installed. The incoming call will show as a normal ring signal on the DSS key and can be answered by the operator at any time even while the voice message is playing to the caller.

0=5 seconds	1=10 seconds	2=15 seconds	3=20 seconds	4=25 seconds
5=30 seconds	6=35 seconds	7=40 seconds	8=45 seconds	9=50 seconds

05-09-07 - UCD Hold Recall Time:

After the assigned time duration, if a station in the hunt group or the system operator has not become free, the caller will recall the VSU and VSU 2nd UCD recording will be played. This time sets the hold value. The message will be played to the caller every time the recall time is reached until answered by the operator or the caller hangs up.

0=disabled (Does not recall)	1=30 seconds	2=45 seconds	3=60 seconds	4=75 seconds
5=90 seconds	6=105 seconds	7=120 seconds	8=135 seconds	9-150 seconds
Values changed in software version G1-a10ax (listed below)				
0=disabled	1=5 seconds	2=10 seconds	3=15 seconds	4=20 seconds
5=25 seconds	6=30 seconds	7=40 seconds	8=50 seconds	9=60 seconds

05-09-08 - UCD Duration Time:

If a call has not been answered by a live person by the time this timer expires, the system will disconnect the outside caller. The system will play a warning message to the caller before releasing the call

0=No Disconnect Timer	1=5 minutes	2=10 minutes	3=15 minutes	4=20 minutes
5=25 minutes	6=30 minutes	7=35 minutes	8=40 minutes	9=45 minutes

Form 05-10 - Voice Mail Leading Digits G1-A10n G1-A20o								
Form 05-10-**T**	01	02	03	04	05	06	07	08
Range of Entries								
Default	d	d	d	d	d	d	d	d

Description

This parameter allows the system to insert digits before the call forwarded station number when the call forward is received by the voice mail port if Standard Protocol is selected. If the station numbering is only 2 or 3 digits the system will insert additional digits if the Voice Mail requires more. The last digits of the voice mail box number will still have to be the same as the station numbering for correct recognition. The HOLD key can be used to insert a pause in the DTMF tone sending and will display as a (p). The DND key is no digits sent and is shown as a (d).

Example

The *SYSTEM* is set to 2 digit numbering but the voice mail requires 4 digits. The voice mail also requires a pause between answering the call and the tones being sent. Set this parameter to the following

```
05-10-IP SYS PAR
p 1 1 d d d d d
```

When the call forwarded station 11 is answered by the voice mail port after the pause time the digits 1111 will be sent to the port by the system. If station 11's voice mail box is 1111 then the mailbox number 1111 will be automatically opened by the tones.

There are 2 different Voice Mail Protocols available in the *TD-824i* depending on the setting in Form 05-12-05. If this mode is set to 0 then the Protocol will be the leading digits entered in this Form plus the Station Number of the forwarded station. If Form 05-12-05 is set to 1 then the Enhanced Protocol that follows will be used.

Enhanced Protocol

Enhanced Protocol is a more sophisticated means of integration with most voice mails. Its use is preferable to that of the integration of 05-10 in most cases. Within the enhanced protocol the TD-824i defines specific types of calls. Depending on the application and the type of voice mail, this allows for the maximum flexibility in the processing of calls. Each digit string will be unique to the type of call and the user.

The format is as follows:
>1 + extension number = Call Forwarding All Calls
>2 + extension number = Call Forward Busy
>3 + extension number = Call Forward No Answer
>4 + extension number = Direct Call to Voice Mail (Auto Login)
>5 + extension number = Call Record
>6 + extension number = Recall to Voice Mail
>7 + CO Trunk Number = Incoming CO Call
>9# + extension number = Direct to Mailbox (Take A Message)

Note: G1-A10n (& G1-a20o) updated system software so that all calls sent to a hunt group by voice mail will recall to voice mail and send the integration digits for the hunt group. So if a call is transferred to a hunt group with the pilot number of 65 by voice mail and the call returned to voice mail, the integration string will be 6+65. Previous versions of software sent the last member of the hunt group for the integration information.

In the case of codes 1+ through 6+ and 9#+ the actual string will be the identifier digit plus the actual extension number.
Systems using two digit numbering will send a total of three digits (identifier plus 2 digit extension number).
Systems using three digit numbering will send a total of four digits (identifier plus 3 digit extension number).
Systems using four digit numbering will send a total of five digits (identifier plus 4 digit extension number).

If the Incoming trunk indentifier is enabled in the TD-824i on Form 05-12-05 the dial string will be 7+ a two digit trunk number, so an identifier for trunk 1 will be 701, trunk 2 is 702 and so on.

Answer Digit When a called station answers the System will play **[DTMF A]** to the voice mail port.
Busy Digit. When a called station is busy the system will play **[DTMF B]** to the voice mail port.
Disconnect Digit. The system will play **[DTMF C]** when an inside station disconnects or when a V/M is connected to a CO trunk which receives polarity reversal or Loop Disconnect.
These 3 functions will considerably speed up the operation of the V/M as it will not have to wait to listen to tones to see what is happening with calls.

Answering Machine Operation

When activated this function allows the caller to set call forward to the Voice Mail as usual but then monitor calls to the Voice Mail from his key phone (on hook) and if they wish can lift the handset and take the call back from the Voice Mail. To enable the user presses **[SPK] [7][7][3][1]** and to disable presses **[SPK] [7][7][3][0]**. You may have a button on your telephone programmed for Answering Machine Emulation. If so, Press the Answering Machine button. It will light up, indicating your telephone is in Answering Machine Mode. To remove from Answering Machine Mode, press the Answering Machine button again. The light will extinguish, indicating your exit from Answering Machine Mode.

Record Function

This function is dependent on the Recording Unit being capable of inserting the recording tone to alert the caller they are being recorded. To record it is necessary for the Key phone to have a **[RECORD]** key which is **FN 48 .** During a call the STN presses the [RECORD] button and the Voice Mail will answer if a port is available and the system will send the Protocol 5 + STN NO.

Direct To Voice Mail

Direct to Voice Mail allows a station to place another caller directly in a user's mailbox without the need to dial special codes. A station user presses the "Transfer to Voice Mail Key" and then either dials the extension user's number or presses their DSS button. The call is immediately routed to their voice mail box and their greeting without the need to transfer to a station and allow forwarding to take place. Assign FN:25 to a key (Form 07-*group-key*) for the phones you want.

Message Waiting Digits

Message Waiting is a non-programmable string that is sent by the voice mail system to the TD-824i in order to activate message waiting on telephones. The TD-824i accepts the following codes for Message Waiting utilization:

Message Waiting ON: 7071 + Extension Number
Message Waiting OFF: 7072 + Extension Number

More About Voice Mail

Voice Mail Ports are configured on Form 43-Port-02. Setting this parameter to a value of 8 identifies it as a voice mail port. It will then receive the integration digits selected for the system. All voice mail ports in a system must be set to type 8.

All Message Waiting levels for Voice Mail ports must be 9. Message Waiting level is set on Form 46-ext-02.

Voice mail ports must be assigned to Hunt Group 1 in the TD-824i. The Pilot number for Hunt Group 1 is assigned on Form 67-01. Individual member of Hunt Group 1 are programmed on Form 68-01-01 for Day Service and 69-01-01 for Night Service.

When a voice mail port sets a message waiting on an LCD display set, the callback number displayed will be the first member of the hunt group. Message callbacks will call the station displayed. If it is busy, the system will hunt, just as if you had dialed the pilot number of the hunt group.

Form 05-11 - System Parameters Form – Supplemental[G1-a10ao]								
Form 05-11-**T**	01	02	03	04	05	06	07	08
Item								
Range Of Entries	0	0	0	0	0-3	0-9	0-9	0-8
Default	0	0	0	0	0	0	1	0

05-11-01 – Caller ID Ignore Header Digit:[G1-a10a0]

This option is enabled for locations where a non-numeric character precedes the Caller ID information. The non-mumeric character is not displayed on LCD displays. **It is not normally found in North America**.

0=No Entry	1=Header "A"	2=Header "B"	3=Header "C"
4=Header "D"	5=Header "*"	6=Header "#"	

05-11-02 - DISA Password:

This parameter when enabled will increase the number of DISA passwords from 1 to 24. At the default setting of 0 the DISA password will be set in Form 13-02. If the parameter is set to 1, 24 passwords are available and they will be the same as the forced account codes numbers (25-48). Forced account codes are set in Form 17-(00-48).

0=Disable	1=Enable

05-11-03 – Music On Hold/Ringback on Transfer:

This parameter selects what the incoming caller will hear during Ring Transfer and Hold Recall conditions. The feature is designed for the U.S. to prevent the caller from hearing recognizing the TD-824i International Ring Back Tone and mistake it as a disconnect or busy signal and hanging up even though their call is still in progress.

0 = Ring Back Tone	1 = Music On Hold	2 = Silence

05-11-04. DISA Access Delay NIght Service:[G1-a20m]

This parameter sets the time duration that a DISA trunk will ring prior to connection to return dial tone or VSC message. (Stations can answer during this time.)

> 0 = Automatic connection, no ring to the stations.
> 1-8 = Automatic connection after 2-254 seconds ringing as listed below.

Pre: G1-a20m this option controlled the DISA Delayed Answer Timer during both Day Service and Night Service.

Version G1-a20m and newer: DISA delayed answer timer has day/night mode

> The DISA answer delay reference 05-01-04 in day service.

> The DISA answer delay reference 05-11-04 in night service.

0=0 second	1=2 seconds	2=4 seconds	3=6 seconds	4=8 seconds
5=15 seconds	6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds

05-11-05 - DISA Digit Acceptance:

This parameter sets which of the system functions are accessible by DISA callers

0=All special digits allowed	1=[*],[#] Allowed - [8],[9] Disallowed
2=[8],[9] Allowed - [*],[#] Disallowed	3=No Special Digits Allowed

05-11-06 - DISA Transfer Count:

This function sets the number of times that an unsuccessful DISA call will attempt to retry a station and or transfer to a console after the ringing time set in Mode 05-08-06. A setting of 9 may cause trunks to lock up on systems that are completely unattended overnight. Please use care if you select 9 as the value for this parameter.

0=2	1=3	2=4	3=5	4=6
5=7	6=8	7=9	8=10	9=Infinite

05-11-07 - Door Phone Ring Timer:

This parameter sets the time that Door Phone ring assigned stations will ring for when the Door Phone button is pressed.

0=5 seconds	1=10 seconds	2=15 seconds	3=20 seconds	4=25 seconds
5=30 seconds	6=35 seconds	7=40 seconds	8=45 seconds	9=50 seconds

05-11-08 - DISA Single Digit Dialing:

This feature allows a DISA caller to dial stations by 1 digit (1-5) using the settings in Form 10-gp-IP to set which station will be dialed by each digit

	0=No Single Digit Dialing
1=Single Digit Group 1	2=Single Digit Group 2
3=Single Digit Group 3	4=Single Digit Group 4
5=Single Digit Group 5	6=Single Digit Group 6
7=Single Digit Group 7	8=Single Digit Group 8

Form 05-12 - System Parameters Form - Miscellaneous [G1-a10h G1-a20u]								
Form 05-12-**T**	01	02	03	04	05	06	07	08
Item								
Range Of Entries	0	0	0-1	0 - 4	0-1	0	0	0
Default	0	0	0	4	0	0	0	0

05-12-01 – TRF/FL Key Operation: [G1-a20u]

If set to 0, transfer procedure requires that the TRF/FL

0=TRF/FL is pressed to transfer a call to a station. When talking to a trunk, will flash the trunk

1=Can transfer to an extension by hanging up. When talking to a trunk, press TRF/FL will flash the trunk.

2=TRF/FL is pressed to transfer a call to a station. [G1-a20u]
When talking to a trunk, with a trunk on hold, will create unsupervised conference.

05-12-02 – Mute CO trunk on disconnect (open loop): [g1-a10h] (discontinued g1-a10n)

0=Do not Mute	1=Mute Audio on CO on open loop

Note: 05-12-02 was eliminated in software version G1-a10n. It is now an automatic function that is applied whenever 05-09-03 (CPC loop disconnect) is set to any value other than 0.

05-12-03 - Exclusive Hold:

A call on exclusive hold cannot be readily retrieved by any other station. On all TransTel digital telephone stations, a call on exclusive hold will appear to other stations as a busy line (steady illuminated red pushbutton). The call owner will see a slow flash, to differentiate the exclusive call from other calls in the system.

0=Enable	1=Disable

05-12-04 - Door Relay Activation Timer:

This parameter sets the time that the door unlock relay will remain activated after the Door Unlock function is activated by the user. The Door unlock relay is programmed in Mode 06

0=1 second	1=2 seconds	2=3 seconds	3=4 seconds	4=5 seconds
5=6 seconds	6=7 seconds	7=8 seconds	8=9 seconds	9=10 seconds

05-12-05 - Voice Mail Integration Type:

This parameter selects between Standard Voice Mail Call Forward Protocol and the Digit+ Extension protocol. For a full description of Voice Mail Protocol see Mode 05-10. This parameter will also enable or disable muting of the leading digits to the outside caller.

0=Use Form 05-10 DTMF Not Muted	1=Use Digit + Extension spec. DTMF Not Muted
2=Use Form 05-10 DTMF Muted	3= Use Digit + Extension spec. DTMF Muted
4=Same as 0.	5= Use Digit + Extension spec. Not Muted. Does Not send Direct CO Call Code
6=Same As 2	7= Use Digit + Extension spec. DTMF Muted. Does Not send Direct CO Call Code.

05-12-06 Trunk Group Access Type:

If this parameter is set to 0 then line selection will be the first available trunk in the users dial (9-0) group. If the parameter is set to 1 then the lines will be selected in a Circular fashion till all lines have been used and then the selection will start again. Do **NOT** use Circular with CO lines unless there is a very good reason as call collision is more likely to occur as a result.

0=Linear Hunt	1=Circular Hunt

05-12-07 - LED indication of Check in / Check out:

This parameter disables or enables the LED indication for Check in/Check out features for the DSS consoles and DSS Keys

The LED indications are as follows:

Red and slow flash:	If the Reception has checked out an extension, the LED for extension will slow flash red.	
Green:	When the checked out extension's room has been cleaned by the cleaner(maid), they can dial [776] from the phone and hang up. The LED for that extension will go Green. This means the room is ready for a new guest	
Red:	The room is checked in and the phone is in use.	
Off:	The room is checked in and idle.	

0 = Disable	1= Enable

05-12-08 – Reserved:

Form 05-13 - System Parameters Form - Miscellaneous [G1-a10aw]								
Form 05-13-**T**	01	02	03	04	05	06	07	08
Item								
Range Of Entries	0	0	0-1	0 - 4	0-1	0	0	0
Default	1	0	0	1	0	0	0	0

05-13-01. Intercom Hot Key Dialing:

This parameter when enabled allows stations to dial an intercom call On Hook without having to lift the handset or press the **SPK** key.

0 = Disable	1= Enable

05-13-02 Immediate SMDR output:

This parameter when enabled, is for external software to know who is dialing out at this moment. When enabled, if a station user dials out, system will send out the SMDR information immediately. The external software could start to count the cost in the beginning of the call. If the credit is 1 hour and time is expired, the external software could cut the connection by sending some commands back to KSU. Or any other applications are similar to this example could use this feature.

0 = Disable	1= Enable

05-13-03 - Call ID Memory Block Size:

0 = 10 Records per Block	1 = 20 Records per Block
2 = 30 Records per Block	3 = 40 Records per Block

05-13-04 – Reserved:

05-13-05 – Caller ID Display Method:defines whether the system will display the incoming name or number when new calls arrive at the system

0 = Display Number on LCD	1 = Display Name on LCD
5 = Display Name and number of incoming call [G1-a10aw]	

05-13-06. CTI-Trunk Status Report:

This parameter enables trunk status reports for CTI applications (Not currently available in North America).

0=Disable	1=Enable

05-13-07 - 1st Special Rate Day:

This parameter sets an exception day to the standard day schedule. Use when the scheduling information changes on a specific day, such as the first day of the weekend.

0= No Special Rate Day	1 = Monday	2 = Tuesday	3 = Wednesday
4 = Thursday	5 = Friday	6 = Saturday	7 = Sunday

05-13-08 – 2nd Special Rate Day:

This parameter sets an exception day to the standard day schedule. Use when the scheduling information changes on a specific day, such as the second day of the weekend.

0= No Special Rate Day	1 = Monday	2 = Tuesday	3 = Wednesday
4 = Thursday	5 = Friday	6 = Saturday	7 = Sunday

Form 05-14 - System Parameters Form – Miscellaneous

Form 05-14-**T**	01	02	03	04	05	06	07	08
Item								
Range Of Entries	0-8	0	0	0 - 1	0-9	0	0	0
Default	0	0	0	1	0	0	0	0

05-14-01 – ISDN PLL Maintenance:
This parameter controls the function of the internal phase locked loop, used for ISDN trunking.
If set to 0, the system relies on it's internal clock to remain synchronized with ISDN lines.

0=Disable	1=Every hour search an active ISDN Link for synchronization	2~8=Use the ISDN circuit specified for synchronization (2-8)

05-14-02 – Reserved:

05-14-03 – Reserved:

05-14-04 – Trunk Metering Detection:
This parameter detemines which method of trunk metering will be used.
Note: This parameter is not used in North America.

0=Detect 16K meter pulses	1=Detect 12k meter pulses

05-14-05 – Caller ID Delay Ring Timer:
In applications using Caller ID, it may be necessary to delay the start of incoming ringing in order to allow Caller ID be to sent to the telephone system. This timer will cause the system to delay ringing up to the time selected in this timer or until a valid Caller ID record is received, whichever occurs first.

0=disable	1~9=Delay *n* seconds or until valid CID record received

05-14-06 – Reserved:

05-14-07 – Reserved:

05-14-08 – Reserved:

Form 06-01 - Relay Assignment Form:[G1-10a6]

TD-MSC card has 1 dry contact relay.

No voltage is provided by the system, the installer will have to provide their own source to suit the application. Only use the relays to switch 24V. They are only designed for low voltage control circuits. All Relays are Normally Open contacts and will close on activation of the function for which they have been programmed.

Note: This description applies to systems with software prior to version G1-A10a6 only!

For newer versions, the internal relay is controlled using entry 06-00

00-10

Valid Settings:	
00=Non-Operational (Default)	04=CO Line Loud Bell
01=Music On Hold	05=Station Loud Bell
02=Door Latch Release	06=System Alarm

Form 06-st – ACP/Doorphone Relay Assignment Form:[G1-10a6]

Each Digital doorphone and ACP contain a relay. The relay can be assigned as listed above
No voltage is provided by the system, the installer will have to provide their own source to suit the application. Only use the relays to switch 24V. They are only designed for low voltage control circuits. All Relays are Normally Open contacts and will close on activation of the function for which they have been programmed.

Note: This description applies to systems with software prior to version G1-A10a6 only!

For newer versions, the internal relay is controlled using entry 06-00

00-10

Program Template For Key Assignment
Form 07

Instructions: When programming Form 07 to assign various features to key groups, use the following key numbers and assign the desired feature accordingly. Example, if you want to make key 22 as it appears on the DSS paper to be a Zone Paging Key, you would enter the data as 07-GP-20. The data would be FN:23. Note the actual key number for programming differs from that of the DSS paper. This is done so the station numbers begin with 11, after the 8th line in the system.

MIC/AT— Change Functions
Key 1— Go down a key
Key 2— Go up a key
Key 3— Move Left
Key 4— Move Right

DK-2 Key Layout

Note: Keys 1 through 29 are programmable. Keys 30 – 34 are not currently usable on the TD-824i

DK-3 Key Layout

Note: Keys 31 – 32 are not currently usable on the TD-824i.

Form 07 - Flexible Key Group Assignment:

07 - Group 01			
Key	Function	Key	Function
01		16	
02		17	
03		18	
04		19	
05		20	
06		21	
07		22	
08		23	
09		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			

07 - Group 02			
Key	Function	Key	Function
01		16	
02		17	
03		18	
04		19	
05		20	
06		21	
07		22	
08		23	
09		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			

07 - Group 03			
Key	Function	Key	Function
01		16	
02		17	
03		18	
04		19	
05		20	
06		21	
07		22	
08		23	
09		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			

07 - Group 04			
Key	Function	Key	Function
01		16	
02		17	
03		18	
04		19	
05		20	
06		21	
07		22	
08		23	
09		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			

Form 07 - Flexible Key Group Assignment:

07 - Group 05

Key	Function	Key	Function
01		16	
02		17	
03		18	
04		19	
05		20	
06		21	
07		22	
08		23	
09		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			

07 - Group 06

Key	Function	Key	Function
01		16	
02		17	
03		18	
04		19	
05		20	
06		21	
07		22	
08		23	
09		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			

07 - Group 07

Key	Function	Key	Function
01		16	
02		17	
03		18	
04		19	
05		20	
06		21	
07		22	
08		23	
09		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			

07 - Group 08

Key	Function	Key	Function
01		16	
02		17	
03		18	
04		19	
05		20	
06		21	
07		22	
08		23	
09		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			

General:

This program assigns 8 groups of Flexible key plans for Key phones.

Each Key phone can be assigned to use two groups (Mode 41-st-(02 & 03)).

Database Entry is as follows: 07-Gp-Key.

For example: Form 07-01-01 Refers to Form 07 – Key Group 1 – Button 1.

Form 07-01-29 Refers to Form 07 – Key Group 1 – Button 29.

Description:

Each key can be assigned as either a **Trunk**, a **Station** or a **Function**.

To change the assignment from TK to Station or to Function or vice versa, press the **{Change}** key before setting.

nn = 01-10 - Trunk Key (1 to 10)   **xx** =   10-69 - Station Key (2 digits)

xxx= 100-699 - Station Key (3 digits)   **xxxx** = 1000-6999 - Station Key (4 digits)

fn = 00-65 - Function Key (0 to 65)

Form 07 - Key Assignment Parameters:			
Description	Entry	Description	Entry
CO Lines 01-08	CO:XX	Any valid Station Number	XXXX
1A2 Emulation	FN:24	Microphone / Auto Answer	FN:04
Account Code (Forced)	FN:09	Paging All Internal	FN:20
Alarm Assign (Wakeup)	FN:47	Paging All External	FN:21
Caller ID History	FN:32	Paging All Internal/External	FN:22
Call Forward	FN:53	Paging Internal Zone	FN:23
Call Pickup Own Group	FN:35	Page Meet Me	FN:56
Call Pickup All Groups	FN:36	Program Key	FN:01
Call Pickup Group	FN:37	One Touch Speed Dial Key	FN:00
Date / Time Set up (Console)	FN:50	Redial	FN:07
Do Not Disturb/Conference	FN:02	Reminder Key (Operator only)	FN:48
Directory Key	FN:62	Save	FN:06
Day/Night Key	FN:52	Shift Key	FN:57
Door Phone	FN:60	Speed Dial	FN:05
Headset Operation	FN:29	Split/Swap Key	FN:26
Hotel/Motel	FN:59	Voice Mail Transfer Key	FN:25
Lock/Unlock Station	FN:14	Voice Mail Answer Machine Emulation	FN:27
Lock Override (One Call)	FN:16	Voice Mail Live Call Recording	FN:34
Message Waiting / P/T	FN:03	Volume Level Setup	FN:10

Form 08-01-IP - DSS Key Group Assignment:

General:
This program assigns 1 group of Flexible key plans for DSS Consoles. There is 1 key group available in the TD-824i.
Form 08-01 = DSS Key Group 1

The DSS Key Group to which a particular DSS console belongs is assigned on Form 43-port-03.

Database Entry is as follows: 08 – 01 – Key Number.
    For example: Form 08-01-01 Refers to Form 08 – Key Group 1 – Button (Key) 1.
                    Form 08-01-59 Refers to Form 08 – Key Group 1 – Button 59.
Assignment Values are the same as in Form 07 of this document.

Note: DSS Consoles are associated with individual stations.This is done through form 43-port-01. In order to make this association, the DSS console is assigned the same extension number as the telephone to which it will be associated.   Please see Form 43 in this manual.

For example, If the DSS console connected to port 12 will operate in conjunction with extension 11, then 43-12-01 must be set to 11.

Form 08-01 – DSS Key Group Assignment:							
Key	Function	Key	Function	Key	Function	Key	Function
01		16		31		46	
02		17		32		47	
03		18		33		48	
04		19		34		49	
05		20		35		50	
06		21		36		51	
07		22		37		52	
08		23		38		53	
09		24		39		54	
10		25		40		55	
11		26		41		56	
12		27		42		57	
13		28		43		58	
14		29		44		59	
15		30		45		60	

Form 09 - System Speed Dial Assignment:			
Special Characters			
HOLD=Pause (p)		MSG=Tone (T)	TRF/FL=Flash(F)
MIC/AT = Change Key Toggles between Line entry, telephone number entry and name entry.			
Bin # 09-	TK: ##	Number	Name
____0			
____1			
____2			
____3			
____4			
____5			
____6			
____7			
____8			
____9			

General:

This program permits the assignment of up to 500 sets of system speed dialing codes.

Description:

nnn	= 100-599	= Speed dial code, up to 500 sets in total.
DP	= 01-30	= Digit Pointer for telephone number. 30 digits per speed dial code.
tt	= 01-10	= Pre-assigned CO line number.

Pre-Assigned CO Line:

Press the **{Change}** key to change or clear the Pre-assigned CO line number. This CO line is the dedicated outgoing line for the speed dial code. If the user presses a speed dial code without selecting a CO line first, the system will select this CO Line automatically. If no CO line is assigned, the system will select an available CO line according to the assigned Dial 9 group (Program 41-nnnn-04). A line may also be selected directly by the user.

Telephone Number:

30 digits maximum may be entered in each memory.
In addition to the digits 1 to 0, *, # the following can also be stored: Pause, Flash, Pulse to DTMF. Each function occupies one digit.

Form 09 Continued

i)   Pause : During dial procedures, the dialing will wait for a programmable period
             (Refer Program 05-01-06).

ii) Flash : This will make a loop disconnection of a pre-assigned duration.
             (Refer program mode 05-02-05).

iii) Pulse to DTMF : If the dialed signal is "pulse", it will change to "DTMF".

Note: Pressing **{Don't Care}** will erase the digit which the cursor is on.
          Pressing **[REDIAL]** will erase all the assigned digits.

Note: An indication of TK:00 will cause the system to utilize the first free line in a station's dial 9 group.
          An indication of 01-08 will cause the system to always select the same CO Line.

Note: To enter a name, press the CHG (Volume Down) key until the letter "N" appears in the upper right
          corner of the LCD display. Letters and numbers may be entered through the keypad. For Dial by
          name to operate, 05-05-05 must be enabled.

Phone numbers may not exceed 30 digits in length (including special characters). Names may be entered up to 30
characters, but will only be displayed to 16 characters.

Form 10 - Single Digit Dialing Assignment :

Form 10 - Single Digit Group 01						Form 10 - Single Digit Group 02					
Item	01	02	03	04	05	Item	01	02	03	04	05
Station						Station					
Form 10- Single Digit Group 03						Form 10- Single Digit Group 04					
Item	01	02	03	04	05	Item	01	02	03	04	05
Station						Station					
Form 10- Single Digit Group 05						Form 10- Single Digit Group 06					
Item	01	02	03	04	05	Item	01	02	03	04	05
Station						Station					
Form 10- Single Digit Group 07						Form 10- Single Digit Group 08					
Item	01	02	03	04	05	Item	01	02	03	04	05
Station						Station					

General:
This program permits the stations in one or more station groups to call a specific station by dialing one digit only. To enable station Single Digit Dialing, Form 05-04-07 must be set to 1 = Enabled.

The settings in this Form are also used by DISA Single Digit Dialing (Form 05-11-08 to enable for DISA use).

Description:
Single Digit Intercom.
When single digit dialing is enabled and a group (1-8) selected in Form 41-stn-01 then extensions will be able to dial the stations in the group selected by dialing the digits 1 to 5. The digit 1 will call the first station in the group, 2 will dial the second station in the group and so on up to digit 5. The caller can also dial 6 and then dial a full extension number to call other extensions or dial (0 or 9) to call the operator.

If a particular group has no entries programmed, the stations in the same number station group will not have single digit dialing and will not have to use the station to station prefix.

Note: Default programming places all stations in Single Digit Group 1.

Single Digit DISA.
When single digit dialing is enabled and a group (1-8) selected in Form 05-11-08 then DISA callers will be able to dial the stations in the group selected by dialing the digits 1 to 5. The digit 1 will call the first station in the group, 2 will dial the second station in the group and so on up to digit 5. The caller can also dial 6 and then dial a full extension number to call other extensions or dial (0 or 9) to call the operator.
If a position is left programmed to 0 then station numbers starting with the digit, which corresponds, to this position can be dialed in full.

Example

10-01-IP S.D.I.
11 13 22 00 55

In the above example an incoming DISA caller subject to Single Digit dialing group 01 who dials 1 will call station 11, dialing 2 will call station 13, 3 will call Station 22. Dialing 4 will allow the caller to dial the full extension number of any extension, which starts with 4, e.g. 44. 55 has been assigned as a Hunt Group Pilot number so a DISA caller dialing 5 will call the Station hunting group which has 55 as it's pilot Number. Pilot numbers are set in Mode 67 and Hunt groups are programmed in Form 68 and 69.

A station with single digit dialing enabled will ring the station number programmed in Item 01 whenever that station dials 1. It will ring the station number programmed in Item 02 whenever the station dials 2, etc.

Single Digit Dialing is enabled on the system by programming Form 05-04-07 as 1 (Enable).
Any station that is to utilize Single Digit Dialing must be assigned to a Single Digit Dialing Group on Form 41-STN-01.

DISA Single Digit Dialing is enabled on Form 05-11-08. The group selected will correspond to the table entry on this form. A setting on 05-11-08 of 0 disables DISA Single Digit Dialing.

Form 11 - Date and Time Settings:										
Form 11 - Date and Time										
Item	01	02	03	04	05	06				
Input										

01= Month   02=Date   03=Year   04=Hour   05=Minute   06=Day of Week

General:

This program permits the setting of system Date & Time.

Description:

The Date & Time will be held during a power failure on the TD-824I if G1-MSC is fitted, there is no need to reset the Time after power is restored.

All entries are two digit, except 06 which begins with Sunday as 0, Monday as 1, Tuesday as 2, etc.

Form 12 - System Alarm Schedule:		
Schedule:	Alarm Time (24 Hour Format 00:00-23:59)	Duration (01-98 minutes)
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		

General:

This program permits the assignment of 10 time schedules for alarm clock purposes.

Description:

When the assigned time is reached, Background music will be broadcast over all Key telephones, which are idle.
The time duration for alarm clock music is programmable (00 to 99 minutes.).
Note: A duration of 00 will deactivate a system alarm
Time entry format: 12 midnight until 11:59 AM = 00:00 to 11:59.
12 Noon until 11:59 PM = 12:00 to 23:59.

Form 13 - System Passwords:								
d(on't care) = DSS Key 4. All other digits are entered from the station keypad.								
13-01 System Programming Password								
Password								
Default	d	d	d	d	d	d	d	d
13-02 DISA Password								
Password								
Default	3	4	7	2	d	d	d`	d
13-03 Toll Override Password								
Password								
Default	8	6	5	5	d	d	d	d
13-04 Monitor Password								
Password								
Default	d	d	d	d	d	d	d	d

General:

This program permits the assignment of 9 different passwords in the system.

Description:

The password length is from 1 to 8 digits. All unused digit positions must have **'d'** entered in them.

Password No. 1 = Programming Password. System Default is None.

Password No. 2 = DISA Password. System Default is 3472.

Password No. 3 = Toll Free. System Default is 8655.

Password No. 4 = DISA Monitor Password.

Password No. 5 to 9 = Future.

Form 14 - Station Message Detail Recording:

Form 14 -01-	01	02	03	04	05	06	07	08
Item								
Options	0-9	0-1	0-1	0-1	0-1	00-99	0	0-1
Default	0	0	0	0	0	21	0	0

14-01-01 - Recording Start Time:

This parameter determines a "grace period" before call costing begins. This allows for calls that are made but unanswered. Calls that last less than the amount of time specified in this parameter will not be reported via the SMDR port.

0=immediate start	1=5 seconds	2=10 seconds	3=15 Seconds	4=20 Seconds
5=25 Seconds	6=30 Seconds	7=35 Seconds	8=40 Seconds	9=45 Seconds

14-01-02 – Record Incoming Calls:

This parameter determines if inbound calls generate a record via SMDR

0=Enable (Record Incoming Calls)	1=Disable (Do Not Record Incoming Calls)

14-01-03 – Record Calls Local Calls (No Toll Access Code):

Outbound calls that begin with the toll access code programmed on Form 05-03-05 are considered toll calls in this parameter. If this option is enabled, calls that do not begin with the selected toll code, they will still be recorded via SMDR. If this option is disabled, calls do not begin with the toll access code in 05-03-05 will not be recorded via SMDR.

0=Enable (Record local calls)	1=Disable (Do Not Record local calls)

04-01-04 - Record Unanswered Incoming Calls:

This parameter determines if an unanswered incoming call is recorded via SMDR.

0=Enable (Record Unanswered Incoming Calls)	1=Disable (Does Not Record Unanswered Incoming Calls)

14-01-05 -Print Page Header:

This parameter decides whether the system will output the description of each column.

0=Enable	1=Disable

14-01-06 - Number of Call Records To be Printed Between Headers:

This parameter permits the assignment of the number of records between each Header.
If the Number = 00, The whole SMDR feature will be disabled.

00=Disable SMDR	01-99=Actual Number Of Call Records Between Headers

14-01-07 – RESERVED:

14-01-08 - Detect Polarity Reversal: If reversal is disabled, the system will start the call timer after accessing a CO line. If reversal is enabled, the system will start the call timer after the called party answers.	
0= Not Detect P.R. / Normal SMDR format output	1= Detect P.R. / Normal SMDR format output
2= Not Detect P.R. / Simple SMDR format output	3= Detect P.R. / Simple SMDR format output

SMDR OUTPUT DATA FORMAT

```
ST.    TK S  TELEPHONE NUMBER            Account     MM/DD  START DURATION     RING    UNIT

 112   01    001188629645752             12345678    10/02  08:35 00:02'35"
 115   02    Incoming                    87654321    10/02  08:45 00:10'20"    00'10"
 000   03    Incoming no answer                      10/02  12:00              00'35"
 112   04    001188629645752             FAC:01      10/02  12:10 00:02'00"
 112   03 X  FAC or PSW error                        10/02  12:30
 112   05 X  001                                     10/02  12:35 00:00'05"
 121   01 #  0294150100                              10/02  14:15 00:00'55"
 117   01 *  0294150100                              10/02  14:15 00:03'10"
 D3    05    0418220212                              10/02  21:01 00:02'30"
D-03   D     << D I S A   OFF >>                     10/02  21:00 00:02'40"
 112   02    DDI Num:  94150112                      10/02  08:45 00:10'20"    00'10"
       03    CLI NoAns:294176288                     10/02  12:00 00:00'00"    00'35"
 111   05    CLI Num:  294150100                     10/02  12:35 00:00'05"    00'05"
       05    DDI NoAns:94150112                      10/02  12:37 00:00'00"    00'27"
```

TITLE DESCRIPTION:

ST = Station No.   : 11 to 6999, D = DISA
TK = Trunk No.   : 01 to 10,
S = Status   : # = Hold, * = Answered the hold, X = Cut off by toll restrictions.
Telephone Number   : First 24 digits
Account   : 8 digits in total
MM/DD   : Month/Day
Begin_Time hh:mm   : The start time of accessing the trunk line.
Duration_Tm hh:mm:ss   : Time duration of the call.
Ring_Tm   mm:ss   : Incoming ring time.
Unit   00000   : Meter Pulse Count

CASE EXPLANATION:

CASE 1: October 2, 08:35 A.M., Station 112 made a call (telephone No. is 00116495256611) through line 1. The call lasted 2 minutes and 35 seconds, Account code No. 12345678 was entered for the call and 12-meter pulses were recorded.

CASE 2: October 2, 08:45 A.M., An incoming call on line 2, rang for 10 seconds, station 115 answered the call and stored an Account No. 87654321.

CASE 3: October 2, 12:00 P.M., An incoming call through line 3, rang for 35 seconds, no one answered and the call was abandoned.

CASE 4: October 2, 12:10 P.M., Station 112 made a Long Distance call through line 4 by Forced Account Code 1 and 23 meter pulses were recorded.

CASE 5: October 2, 12:30 P.M., Station 112 made a call by Forced Account Code but was denied because of a wrong code.

CASE 6: October 2, 12:35 P.M., Station 116 made a call, which was restricted.

CASE 7: Line 1 was used by station 121 for 55 seconds then put on hold. One meter pulse was recorded against this station for its section of the call.

CASE 8: The held line 1 was answered by station 117 and he occupied the line for 3 minutes and 10 seconds. Four meter pulses were recorded against this station for its section of the call.

CASE 9: Incoming Line 3, using the DISA function, made an outside call 018220212 on line 5. The Duration time is for line 5. 3 meter pulses were recorded for this call.

CASE 10: DISA is completed. The Duration time is for line 3.

CASE 11:   Incoming call on an ISDN system. The number displayed is the Indial number dialed by the calling party. The system can be programmed on a station by station basis to select whether calls to that station will display the Indial number dialed or the CLI information of the incoming caller

CASE 12: An incoming call rang for 35 seconds and no one answered. The CLI number of the calling station is displayed.

CASE 13: An incoming call on line 5 (ISDN) was answered by station 111. The SMDR displayed the CLI number (294150100) of the calling party and the extension number (112) of the calling party. The extension number shown is what the system will receive if the call is from another Hybrex with **ISDN**. The format may be different or non-existent from other telephone systems or on PSTN lines. The system can be programmed on a station by station basis to select whether calls to that station will display the Indial number dialed or the CLI information of the incoming caller. The number 94150100 is the pilot number of the Indial group.

CASE 14: An incoming call rang for 27 seconds and no one answered. The Indial number the calling station dialed is displayed.

SMDR OUTPUT DATA FORMAT - NEW With CLI Output

```
ST.   TK  S  TELEPHONE NUMBER      Account   MM/DD   START   DURATION    RING      UNIT
 112  01     001188629645752      12345678   10/02   08:35   00:02'35"             00012
 112  02     DDI Num:94150112                10/02   08:45   00:10'20"   00'10"
      03     CLI NoAns:294176288             10/02   12:00   00:00'00"   00'35"
 111  05     CLI Num:294150100*11            10/02   12:35   00:00'05"   00'05"
      05     DDI NoAns:94150112              10/02   12:37   00:00'00"   00'27"
```

Case 1: Outgoing call. All information remains as before.

Case 2: Incoming call on an ISDN system. The number displayed is the Indial number dialed by the calling party. The system can be programmed on a station by station basis to select whether calls to that station will display the Indial number dialed or the CLI information of the incoming caller

Case 3: An incoming call rang for 35 seconds and no one answered. The CLI number of the calling station is displayed.

Case 4: An incoming call on line 5 (ISDN) was answered by station 111. The SMDR displayed the CLI number (294150100) of the calling party and the extension number (112) of the calling party. The extension number shown is what the system will receive if the call is from another Hybrex with **ISDN**. The format may be different or non existent from other telephone systems or on PSTN lines. The system can be programmed on a station by station basis to select whether calls to that station will display the Indial number dialed or the CLI information of the incoming caller. The number 94150100 is the pilot number of the Indial group.

Case 5: An incoming call rang for 27 seconds and no one answered. The Indial number the calling station dialed is displayed.

Form 17 - Forced Account Code Assignment:

Entries less than eight digits should have "d" in all trailing locations, (e.g., 123245ddd).

##	Actual Code	##	Actual Code	##	Actual Code
01		17		33	
02		18		34	
03		19		35	
04		20		36	
05		21		37	
06		22		38	
07		23		39	
08		24		40	
09		25		41	
10		26		42	
11		27		43	
12		28		44	
13		29		45	
14		30		46	
15		31		47	
16		32		48	

General:
This program creates 48 Forced Account codes.

Description:
The forced account code will temporarily override a station's toll restrictions.
48 codes of up to 8 digits maximum are allowed. If the system is equipped with a call accounting output, the entry for a call made using a forced account code will display the code used in the account code column. The actual numbers of the code will not be displayed for security reasons, the reading will show FAC:XX. XX is the forced account code number 01 to 48.

The Forced Account Code will not be displayed on the screen of Executive phones when it is entered.
Digit "d" is keyed in by **{Don't care}** button and means " Any digit " ("don't care").
Digit "_" is keyed in by **[TRF/FL]** button and means " No digit ".
Clear all digits by pressing **[TRF/FL]** to insert a line in place of the original entry.

Do not use Redial to clear forced account code entries as this will insert "don't care" which will allow any digit as a forced account code.

The Forced Account Codes may also be used as DISA passwords to allow call accounting to show which user was making an external call using DISA from outside the system. In the TD-824i, Forced Account Codes 25 to 48 can be used for this purpose. This feature will need to be enabled in Form 05-11-02

Form 18 - Toll Plan Assignment: [G1-a10aw]										
18-00 - **IT**em	01	02	03	04	05	06	07	08	09	10
18-01 - **IT**em	01	02	03	04	05	06	07	0-8	09	10
18-02 - **IT**em	01	02	03	04	05	06	07	08	09	10
18-03 - **IT**em	01	02	03	04	05	06	07	08	09	10
18-04 - **IT**em	01	02	03	04	05	06	07	08	09	19
18-05 - **IT**em	01	02	03	04	05	06	07	08	09	10
18-06 - **IT**em	01	02	03	04	05	06	07	08	09	10
18-07 - **IT**em	01	02	03	04	05	06	07	08	09	10
18-08 - **IT**em	01	02	03	04	05	06	07	08	09	10
18-09 - **IT**em	01	02	03	04	05	06	07	08	09	10

General:
This Mode assigns Toll Plans to trunk lines. The Toll plans are to be written in Modes 51 to 59 and 61 to 66.

Description:
10 toll plans can be used.

Each Toll Plan assigns each trunk line a Toll Class. It is possible to allow a toll class to have different restriction level on a line by line basis.

Example 1: Form 18-00 is set to 0000dddddd. Any station in the system which is set to toll class 0 will be unrestricted on lines 1 to 4 but will be unable to dial out on lines 5 to 10.

Example 2: Form 18-01 is set to 111100dddd. Any station in the system which is set to toll class 1 will be restricted by toll class 1 on lines 1 to 4, will be unrestricted on lines 5 and 6 but will be unable to dial out on lines 7 and 10. To assign toll plans to stations, see Form **41-st-05, 41-st-06**.

Form 18 continued

Toll Classes:

Class	Function	Prog. Form
0	Unrestricted	Default
1	Use Form 51 for the Unrestricted numbers. Use Form 61 for the Restricted numbers	Form **51,61**
2	Use Form 52 for the Unrestricted numbers. Use Form 62 for the Restricted numbers	Form **52,62**
3	Use Form 53 for the Unrestricted numbers. Use Form 63 for the Restricted numbers	Form **53,63**
4	Use Form 54 for the Unrestricted numbers. Use Form 64 for the Restricted numbers	Form **54,64**
5	Use Form 55 for the Unrestricted numbers. Use Form 65 for the Restricted numbers	Form **55,65**
6	Use Form 56 for the Unrestricted numbers. Use Form 66 for the Restricted numbers	Form **56,66**
7	Use Form 57 for the Unrestricted numbers.	Form **57**
8	Use Form 58 for the Unrestricted numbers.	Form **58**
9	Use Form 59 for the Unrestricted numbers.	Form **59**
*****	Use Form 51-56 for unrestricted numbers. Use Form 61-66 for all restricted numbers	G1-a10aw
d	**Cannot access the trunk line.** (DND/CN button programs a "d" digit)	G1-a10aw

If this form is used for Form 57, 58, or 59 there are no corresponding Restriction tables (i.e., Form 67, 68, or 69. If not otherwise specified on Forms 57, 58 or 59, telephones that are subject to toll plans 7,8, and 9 are unable to place any calls on CO lines.

Note: Each Toll Plan defines the dialing characteristics of a telephone that is assigned the corresponding Toll Plan number, (e.g., a Station that is programmed as Toll Plan 01 will be subject to the dialing patterns defined for each of the CO lines in Plan 01. Toll Plan is assigned to a station on Form 41-STN-05 for definition of Day Service Toll Plan and Form 41-STN-06 for definition of Night Service Toll Plan.

Each Toll Plan carries a default value that is equal to the plan number. For example Toll Plan 00 carries all 4 CO lines with a default value of 0. Toll Plan 01 is set by default with all values at 1, through Toll Plan 09, which carries a default value of 9.

Form 19 - Voice Service Unit Channel Assignment:			
Channel/Item	Function Number	Channel/Item	Function Number
19-01		19-05	
19-02		19-06	
19-03		19-07	
19-04		19-08	
19-01 - 19-08=Channel Assignments			
00	Non-functional (Not Programmed)		
01	DISA: Day Main Answer Greeting		
02	DISA: Dialed Extension is Busy Message		
03	DISA: Dialed Extension does Not Answer		
04	DISA: Dialed number is invalid (doesn't exist)		
05	DISA: Console (Operator) is Busy, Please Hold		
06	DISA: Timer has Expired		
07	DISA: Insufficient Digits Dialed		
08	DISA: Night Answer Main Greeting		
09	External Call Forward Reroute - Tells callers that call is being routed outside.		
10	UCD: Answer Greeting and all stations are busy.		
11	UCD: second announcement all stations are busy.		
12	UCD: All stations busy. Call timer has expired. Call will be dropped		
13	Lunch Greeting (Note: For Disa Trunks only)		
14	Wake Up Message		
15	SLT Message Waiting Advisory		
18	Music On Hold Greeting		

During DISA operation if there is no VSC channel allocated to DISA Night Answer (type 08) then DISA calls will be answered by the DISA Day message in both Day and Night mode.

RECORDING VOICE MESSAGES

VOICE MESSAGES MUST BE RECORDED FROM A MASTER CONSOLE ONLY.

There is a channel available in the TD-824i and this is accessed by dialing 86 from the console. Each channel can be divided into 1 to 8 segments depending on requirements.

```
VOICE PORT (1)   (1)
0=REC 7=PLAY
```

Dial 0 and after the tone has stopped, record the company greeting message,

```
VOICE PORT (1)
RECORDING..............
```

When completed Dial 1 and the screen display will be,

```
VOICE PORT (1)   (2)
0=REC 7=PLAY
```

The 2 in brackets indicate that the second message segment is ready to record. Dial 0 and record the message to apologize for the continuing delay,

```
VOICE PORT (1)
RECORDING.............
```

When the message is recorded dial 1. Continue using the same procedure until all the required segments are recorded and then hang up.

To record and play voice prompts:
1. From the operators station, dial 86
3. LCD display shows:
   The number in parenthesis indicates the voice channel number that is presently being programmed.
4. You must record your entire set of messages, one at a time. Press [0] to record. Press 1 to stop recording and step to the next message section.
5. Repeat step 4 until you have completed all messages you wish to record.
6. To listen to your recording(s), press [7]. The selected message will play. You may step from message to message by pressing [1].
7. The values entered must show what recording has been made first, second, etc.

Form 20 - Day/Lunch/Night Service Switching Schedule:

This program assigns daytime from Sunday to Saturday for automatic night switching and sets lunchtime to allow the VSU to play a different message for this period. All times must be in 24 hour format.

Schedule	Day	Day Service Start	Day Service End	Lunch Service Start	Lunch Service End
20-00	Sunday				
20-01	Monday				
20-02	Tuesday				
20-03	Wednesday				
20-04	Thursday				
20-05	Friday				
20-06	Saturday				

The system is capable of switching automatically between day / lunch break / night settings using the time parameters set in this Mode. To change from manual to automatic night switching the console presses **[PRG] /[TRF/FL]** / *. Pressing * toggles between the 2 modes.

If a Function key has been set to function 52 then pressing this key will change from Day to night mode by one touch but will not change between Automatic and Manual switching.
Example

```
20-01 Day Time
08 30 17 00 12 30 13 30
```

On Monday the system will switch from nighttime to daytime start at 8:30 in the morning, will switch to lunchtime start at 12:30, switch back to daytime at 13:30 and switch to Nighttime at 17:00. To program no lunchtime leave the entries for items on 00.

Form 25 - Reset Data to System Default:

This program resets all data to System Default. All new systems must be reset to default before any programming in case corruption has been caused during handling or shipping. When using item 3 or 4 these must be done AFTER the system reset is performed.

General:

This program resets all data to System Default. All new systems must be reset to default before any programming in case corruption has been caused during handling or shipping. It will also be necessary to reset to default after a software upgrade is installed. When using item 3 or 4 these must be done AFTER the system reset is performed.

Description:

1 = System data will be reset to system default except System Speed Dial Programming.

2 = The system data will be totally reset to system default.

WARNING: All user-defined data will be lost.

3 = For all Stations set
44-st-02=1 (Hold Feature restricted)
44-st-03=1 (Call Split Feature restricted)

This feature is for Hotel/Motel operation. After setting this Mode it is necessary to reprogram the Console and any Administration phones in Mode 44-st-02 to allow them to place calls on hold.

4 = For all stations set
40-st-01=0 (Barge In not allowed)
40-st-02=0 (Monitor not allowed)

It is strongly recommended that this parameter is used on ALL systems to prevent accidental Barge In operations being misinterpreted as cross talk.

All other system programming information remains unchanged when using 3 or 4.

Form 29 - CO Line Specifications #1:

Line	Data	01	02	03	04	05	06	07	08
29-01 Line 01									
29-02 Line 02									
29-03 Line 03									
29-04 Line 04									
29-05 Line 05									
29-06 Line 06									
29-07 Line 07									
29-08 Line 08									
Range		0	0-1	0	0-8	0-8	0-1	0-9	0-9
Default		0	1	0	0	6	0	0	0

29-xx-01-– CO Line Loop Receive Gain:
This parameter allows adjustment of the system's analog trunk interface to adapt to different CO loop resistance.

0 = 0 Km (default)	1 = 3 Km	2 = 5 Km

29-xx-02 – UCD Function Selection: This parameter enables or disables the UCD function for each trunk individually and is able to select whether UCD operates in Day or Night or Both Modes.

0	Day Disable - Night Disable	1	Day Disable - Night Enable [1]
2	Day Disable - Night Enable [2]	3	Day Disable [1] - Night Disable
4	Day Enable [1] - Night Enable [1]	5	Day Enable [1] - Night Enable [2]
6	Day Enable [2] - Night Disable	7	Day Enable [2] - Night Enable [1]
8	Day Enable [2] - Night Enable [2]		

    *1:   Enable ACD-1 function only when all ring assigned stations are busy.
    *2:   Enable ACD-1 function when time set in mode 05-09-06 has elapsed even if the ring assigned stations are idle.

29-xx-01-– CO Line Loop Transmit Gain:
This parameter allows adjustment of the system's analog trunk interface to adapt to different CO loop resistance.

0 = 0 Km (default)	1 = 3 Km	2 = 5 Km

29-xx-04 - Set Ringing Tone:
This feature allows each trunk to ring at DK telephone sets with its own individual ring frequency and override the frequency set by the user for all calls.

0=Use station's default ring	1-8=Use assigned trunk ring cadence

29-xx-05 – Incoming Call Connect:

This feature allows either some or all stations which are ring assigned in Mode 01 or 02 to receive the audible ring signal when a trunk rings at the station. If the audible signal is disabled the station will still be able to answer a call by lifting the handset only, if they are ring assigned in Mode 01 or 02

0=Ring All	1=Ring first station	2=Ring first two stations
3=Ring first three stations	4=Ring first four stations	5=Ring first 5 stations
6=Ring first 6 stations	7=Ring first 7 stations	8=Ring 8 stations
9=Ring first 9 stations		

Example: If there are 12 stations programmed on Form 01-01 and 29-01-05 is set to a value of 5, the first five stations will ring, but all twelve stations will be able to access the incoming line simply by lifting the handset.

29-xx-06. 1A2 Emulation:

When an extension is connected to a trunk, another extension can make a conference by press the busy trunk button if 1A2 Emulation is available. The actual operation of this parameter is dependant upon interaction with Form 78-ST-03, described elsewhere in this manual.

0=No Trunk Access	1=Access Conditional upon 78-STN-03

The 1A2 Emulation status is shown below:

29-xx-06	78-St-03	Status
0	N/A	No access
1	0	No access
1	1	access with tone
1	2	access with no tone

Even if 1A2 Emulation status is enabled, the extension can temporarily disable 1A2 emuation by pressing Function key: [1A2 Emulation Privacy] – (FN:24 for DSS key in Form 07). When the extension sets 1A2 Emulation Privacy Key, the key LED will light, and other extensions can't enter the call. The extension can press [1A2- Emulation Privacy] again to cancel 1A2 Emulation Privacy and turn the key LED off.

29-xx-07. CO Delayed Ring Timer to Hunting Group:

This parameter sets the delayed ringing time for an incoming call to the hunt group. If the stations in the Ringing Line Preference Assignment (mode 01/02) do not answer the incoming call within the timer listed below, the call will overflow to the pre-assigned hunt group (mode 29-TK-08).
This parameter is operational only when 35-tk-07 (Day Service) or 35-tk-08 (Night Service) is set to 0, 1, 2, or 3.
It does not function when 35-tk-07/08 is set to 4 (Private Line).

0=Overflow Disabled	1 = 8 sec	2 = 16 sec	3 = 24 sec	4 = 32 sec
5 = 40 sec	6 = 48 sec	7 = 56 sec	8 = 64 sec.	9 = 72 sec.

29-xx-08. CO Delayed Ring Overflow Hunting Group:

This parameter sets the pre-assigned overflow Hunt Group for an incoming call. If the stations in the Incoming Ring Assignment Forms 01 and 02 do not answer the incoming call within the pre-assigned time (form 29-TK-07), the call will overflow to the pre-assigned hunt group.

0 = Hunt Group 1	1 = Hunt Group 2	2 = Hunt Group 3	3 = Hunt Group 4
4 = Hunt Group 5	5 = Hunt Group 6	6 = Hunt Group 7	7 = Hunt Group 8
8 = Hunt Group 9	9 = Hunt Group 10		

Form 35 - CO Line Specifications:

Line	Data	01	02	03	04	05	06	07	08
Line 01									
Line 02									
Line 03									
Line 04									
Line 05									
Line 06									
Line 07									
Line 08									
Range		0-1	0-1	0-8	0-8	0-3	0-2	0-3	0-3
Default		0	1	0	0	3	0	0	0

35-xx-01 - Line Type:

0=CO Line (Connected to Telco Lines)	1=Behind PABX (Connected to a PABX Extension or Centrex line)

35-xx-02 - Dial Signaling Type:

0=Pulse Dialing	1=DTMF Dialing

35-xx-03 - External Call Forwarding Location:

(Only applicable if 35-CO-04 is programmed for External Call Forwarding)

0=Not Active	1=Speed Dial 101	2=Speed Dial 102	3=Speed Dial 103
4=Speed Dial 104	5=Speed Dial 105	6=Speed Dial 106	7=Speed Dial 107
8=Speed Dial 108			

35-xx-04 – DISA / External Call Forward Status:

35-xx-04 – DISA / External Call Forward Status:	0=Day Disable/Night Disable
1=Day Disable/Night DISA	2=Day DISA/Night Disable
3=Day DISA/Night DISA	4=Day Disable/Night ECF
5=Day ECF/Night Disable	6=Day ECF/Night ECF
7=Day DISA/Night ECF	8=Day ECF/Night DISA

Form 35 Continued

35-xx-05 - Line Pick Up Enable (Allows a non-ringing station to answer an incoming call):

    Enable = An incoming call on this line can be answered by non-ringing stations.
    Disable = An incoming call on this line can not be answered by non-ringing stations.

This feature is to assign "Private Lines" in conjunction with the programming of dial 9 groups, or to prevent incoming calls being answered by users other than the ring assigned stations

Value	Day Operation	Night Operation
0	Disable	Disable
1	Disable	Enable
2	Enable	Disable
3	Enable	Enable

35-xx-06 - Loud Bell Operation:

The system does not provide any voltage from the assigned relay. A separate ring voltage and ring device will need to be provided by the installer

0=Inoperative	1=Relay #1

35-xx-07 - Day Ring Type

0=Common Audible
Rings all assigned Extensions simultaneously

1=Linear
Each incoming call rings the first available Extension in order of the Extensions assigned in **Program 01-tk.**

2=Circular
The first incoming call on each trunk rings the first assigned Extension, the 2nd incoming call rings the next station, etc.

3=Hunt
If an incoming line rings an extension which is busy or does not answer, after the assigned Hunt Time (Program **05-08-01**,) the call will ring the next available extension assigned in the same group. If the next ringing station is busy the call will immediately move to the next ring assigned extension. If the station does not answer then the call will wait for the Hunt time and then ring the next assigned extension. Once the ring assignment has passed a station which is busy it will provide Off Hook Busy Remind signal and when the station is free if the call is still unanswered the station will begin ringing for that call. Stations which do not answer a call will also continue to ring until the call is answered.

4=Private Line
This is for an incoming private line. The station that owns this private line can set call forward (All, Busy, No Answer) for this private line to the Voice Mail Port (See Program **43-ST-02**).

---

08 - Night Ring Type:

Parameters for this option are the same as 35-xx-07 above, except they apply when the system is in Night Service only.

0=Common Audible	1=Linear	2=Circular
3=Hunt	4=Private Line	

Note: Private Line (35-CO-07/08) can be used when only one station is programmed as the ringing station on Form 01 or 02. When Private Line is enabled, any call forwarding programmed on the station will be honored by the incoming CO line.

Form 36 - CO Line Groups (Dial 9 Groups):								
Line -→	01	02	03	04	05	06	07	08
36 01								
36-02								
36-03								
36-04								
36-05								
36-06								
36-07								
36-08								

General:

This program permits each trunk line to be assigned to different Trunk groups. There are eight groups in total.

This parameter will work with the following features:

. Dial 9 (or 0) access to trunk group.
. Tenant service

Note: Each line group may contain up to eight CO lines.
A line may be programmed in any number of Groups.

Note: LCD *Displays on TD-824i show 10 possible lines. Systems sold within North America currently support only 8 CO lines.*

Form 37 - Busy Out CO Trunk:
This program permits the trunk line to be locked (busy out) by a Technician. This feature is used when the user does not want to use the trunk or to remove a problem line. When the trunk is set to BUSY OUT, the LCD display on the phone will display " Access denied " when that line button is pressed.

```
37-tk Busy Out
0000000000
```
tk = 01-10
Busy out Type

0 = Line is unlocked
1 = Busy for Outgoing calls
2 = Busy for Incoming and Outgoing calls (set line LED off)
3 = Busy for Incoming and Outgoing calls (set line LED on)

Note: LCD *Displays on TD-824i show 10 possible lines. Systems sold within North America currently support only 8 CO lines.*

Form 38 - Alternate CO Line Groups (Dial 87 Groups):

This program permits each line to be assigned to different Trunk groups which can be accessed by dialing [87]. There are 8 groups in total. This group will be available to a station in addition to it's dial 9 group. Always set outgoing calls to start from the highest installed trunk and program in descending order to the lowest trunk equipped. This will reduce call collision particularly in systems with single line telephones.
Press **[REDIAL]** to clear all entries in the table before entering required trunks.

Line -→	01	02	03	04	05	06	07	08
38 01								
38-02								
38-03								
38-04								
38-05								
38-06								
38-07								
38-08								

Form 39-00 - Sensor Assignment Form – KSU Sensor only:

The SENSOR type may be normally open or normally closed and can be set to be activated in Day or Night switching or in both. Parameters 39-02 in the TD-824I set each sensor contact to be a normally open or normally closed type and set whether to work in Day or Night Mode or both

Form 39-Item-	01	02	Name - (Reference Only – Not programmed in system)
Form 39-			

Valid Options for Sensor Item Settings 39-01:

00=Disabled

01=Latch operation (Fire Alarm)
Sensor detects activation, all idle extensions will be rung and all busy extensions will
      Hear the alarm tone. The fire alarm will continue for 10 minutes.
      Pressing **[7][7][7]** from the console will stop the fire alarm.
      The LCD display will show FIRE ALARM !!!! when the alarm is activated.

02=Non-Latching Operation (Break Alarm)
      .The Sensor detects the signal appears, all idle extensions will be rung.
      .The Sensor detects the signal disappears, all extensions will stop ringing.
      The LCD display will show BREAK ALARM !!!! when the alarm is activated.

03=Door Phone 1 Causes the door open command to activate the relay in the KSU instead of in the ACP or TD-DPU1 Digital doorphone unit.

Valid Idle Options for Sensor Item Settings 39-02:

0 = Disable Sensor function
1 = Normally Open, Activated for Day Service only.
2 = Normally Closed, Activated for Day Service only.
3 = Normally Open, Activated for Night Service only.
4 = Normally Closed, Activated for Night Service only.
5 = Normally Open, Activated for Day Service and Night Service.
6 = Normally Closed, Activated for Day Service and Night Service

Note: Individual stations can be programmed to not receive the Break Alarm in Mode 45-st-06.

The ring cadence for the fire alarm will be as follows

    a   B   c   b   A   b   C   b   a   b
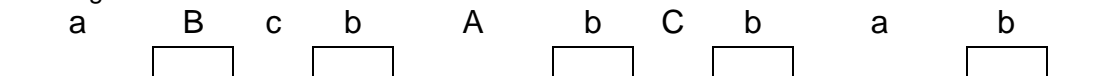
a = 1.25 seconds On   b = 0.25 seconds off   c = 0.25 seconds on.

If door key has been set in mode 07 and mode 39, the Door key on DSS will get the following indications:

Names or labels may be programmed for each of the system sensors. This name will appear on all LCD displays whenever the respective alarm is activated. To access the name programming function, press DSS key 3 (CO Line 3) while in Form 39-Sensor.

All stations to be alerted by sensor activation are programmed on Form 17.

Form 39-st Sensor Assignment Form – ACP and Doorphone Units:[G1-a10aq]			
The SENSOR type may be normally open or normally closed			
Form 39-st-	01	02	Name - (Reference Only – Not programmed in system)
Form 39-			

Starting with software version G1-a10aq, the ability was added to the system to program the sensors that accompany each Digital Doorphone Unit and ACP. Valid settings are:

00=Can provide two different methods of operation. If 50-ACP-01 is set to 0, then the sensor is not programmed. If 50-ACP-01 is set to 1, then the sensor is configured as a latching fire alarm. Sensor detects activation, all idle extensions will be rung and all busy extensions will Hear the alarm tone. The fire alarm will continue for 10 minutes. Pressing **[7][7][7]** from the console will stop the fire alarm.
01=Non-Latching Operation (Break Alarm) When activated, all idle extensions will be rung. When deactivated, all extensions will stop ringing.
03=Non-Latching Operation with LED indication When activated, all idle extensions will be rung. Any extensions with a DSS appearance of the Door Phone Unit will see a flashing indication while the alarm is active. When deactivated, the signal disappears, all extensions will stop ringing LED will extinguish.

Valid Idle Options for Sensor Item Settings 39-02:
0 = Disable Sensor function
1 = Normally Open, Activates on sensor close
2 = Normally Closed, Activates on sensor open

Form 40 - Station Class of Service (Part 1):

Item	Valid Settings	Description	Default
40-st-01	0-9,d	Override/OHCA Level	1=Low
40-st-02	0-9	Monitor Level	1=Low
40-st-03	0-9	Limit Call Duration	0=No
40-st-04	0-1	Station Loud Bell	0=No
40-st-05	0-1	Access Paging	0=Yes
40-st-06	0-1	Receive Paging	0=Yes
40-st-07	0-1	Security Code Status	0=None
40-st-08	00-48	Forced Account Code	00=All

40-STN-01 – Override and OHCA Level:

Higher level stations can override lower level stations, equal levels may override each other.

0=Unable to Override	1-9=Can Override equal and lower numbered levels

40-STN-02 - Monitor Level:

Higher level stations can monitor lower level stations, equal levels can not monitor each other.

0=Unable to Monitor	1-9=Can Monitor lower numbered levels

40-STN-03 - Call Limit Duration:

Conversation will be interrupted by a BusyTone. A warning tone will be given 10 seconds before the end of the timed duration. (see form 05-04-03 to set call limiting action)

0=No Duration Limit	1=3 minutes	2 = 5 minutes
3 = 10 min	4 = 15 minutes	5 = 20 minutes
6 = 30 minutes	7 = 40 minutes	8 = 50 minutes
9 = 60 minutes		

40-STN-04 - Associated Loud Bell:

	0=Disabled	1=Use Relay on MSC Card

The system does not provide any voltage from the assigned relay. A separate ring voltage and ring device will need to be provided by the installer.

40-STN-05 - Paging Access:

Stations will be able to page only if this option is enabled.

0=Enable	1=Disable

40-STN-06 - Paging Over Speaker:

This feature is useful for someone who should not be disturbed by paging calls.

0="All Page" can be received by this station	1= "All Page" can not be received by this station

40-STN-07- Station Lock/Unlock Status:

If a phone becomes locked accidentally or the user forgets their lock code, this parameter will unlock the phone. There is no way of finding what the lock code was.

0 = Station unlocked. (Can make outgoing calls.)	1 = Station locked. (Can not make outgoing calls.)

40-STN-08 - Forced Account Code:

There are 48 forced account codes which can be used on the system. Each user can be allocated use of one or all of these. If a station has a Forced Account Code 01-48, the user can key **[PRG][4]** and the force account code to override toll restrictions for one call only.
If the setting is from 01-48 then this Account Code ONLY can be used by the station. If the setting is 00 then the station can use any one or all Account Codes.
Refer to Form 17, Create Forced Account Code

00=Any Valid Account Code

01-48=Only the corresponding Account Code (01-48) is Valid on this Set

Station Card #1

Form 40-STN-	01	02	03	04	05	06	07	08
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
Default	1	1	0	0	0	0	0	00

Form 41 - Station Specifications

Item	Valid Settings	Description	Default
41-st-01	1-8	Station Group / Agent Group for UCD	1=1
41-st-02	1-8	Key Group For KeyPhone	2=2
41-st-03	1-8	Shift Key Group For KeyPhone	0=None
41-st-04	1-8	Dial 9 trunk group	1=1
41-st-05	0-9	Toll plan - Day	0=0
41-st-06	0-9	Toll plan - Night	0=0
41-st-07	cn	c = Card number, n = Port number	

41-STN-01 – Group Assignment:	
Zone Paging - Pick Up Group Station Group - Single Digit Dialing Group	1-8 = Valid Group Entries

41-STN-02 – Flexible Key Group (EKT):	
(This parameter assigns stations to one of 8 flexible key pattern groups.**)**	1-8 = Applicable Key Group From Form 07

41-STN-03 - SHIFT Key Group (EKT):

Each station can have access to a second soft key group accessed by the **[SHIFT]** key (refer to mode 07). The shift key must be programmed in the first group assigned to the station. When the shift key is used to access the second group then it will light red and override the function assigned to it in the second group.

0 = Disabled	1-8 = Applicable Key Group From Form 07.

41-STN-04 - Dial 9 Group:

When a station selects a trunk line by dialing 9, the system finds an available trunk according to the dial 9 group assignment. If a trunk is not in a stations assigned dial 9 group then the station will not be able to make outgoing calls on that trunk.

1-8 = Applicable Dial 9 Group From Form 36

41-STN-05 - Toll Plan (Day Service):

This parameter assigns the toll plan to be used by the station in day mode.

Refer to Form 18 for Toll plan details.

0-9 = Applicable Toll Plan

41-STN-06 - Toll Plan (Night Service):

This parameter assigns the toll plan to be used by the station in night mode.

Refer to Form 18 for Toll plan details

0-9 = Applicable Toll Plan

41-STN-07 - Port Number:

This is for checking only, the system will automatically show the correct port number. It is not possible for the user to change or remove this parameter.

This parameter is not user programmable

In the TD-824i, the port number consists of 2 digits
11~18: station ports on the G1-MBU
21~28: station ports on the 1st G1-STC card.
31~38: station ports on the 2nd G1-STC or G1-SLC card.

Station Card #1

41-STN--	01	02	03	04	05	06	07	
41-_____							11	
41-_____							12	
41-_____							13	
41-_____							14	
41-_____							15	
41-_____							16	
41-_____							17	
41-_____							18	
41-_____							21	
41-_____							22	
41-_____							23	
41-_____							24	
41-_____							25	
41-_____							26	
41-_____							27	
41-_____							28	
41-_____							31	
41-_____							32	
41-_____							33	
41-_____							34	
41-_____							35	
41-_____							36	
41-_____							37	
41-_____							38	

Form 42 - Personal Speed Dial Table Assignment:

Default	Numerical -01	DSS -02	Default	Numerical -01	DSS -02
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		
42-___-			42-___-		

General:

This program divides sets of **Individual Speed Dial** into blocks for use by Stations.

Description:

- If in program **05-04-06,** the Individual Speed Dial Codes are assigned:
    500 sets**,** the maximum blocks in this program are **50** blocks.
    400 sets, the maximum blocks in this program are **40** blocks.
    300 sets**,** the maximum blocks in this program are **30** blocks.
- Each block has 10 sets of Individual Speed Dial.
- Each set has up to 30 digits.
- Each Station can use up to 2 blocks (20 sets of Individual Speed Dial.)

Example:

| 42-553-IP SPD-T
01 02 | **13**: Station No. (2-4 digits)
01 02: Station 553 can use block **01** and **02** for Individual Speed Dial (20 sets) |

| 42-**15**-IP SPD-T
04 00 | **15**: Station No. (2-4 digits)
04 00: Station 15 can use block **04** (10 sets) for Individual Speed Dial (00-09), **00** : for no block. |

| 42-550-IP SPD-T
00 03 | **18**: Station No. (2-4 digits)
00 03: Station 550 can use block **03** for Individual Speed Dial (DSS 1-10) |

*   Refer to **Keyphone Operation**, for the programming of Individual Speed Dial.
*   Be sure to program these parameters before programming speed dial on key phones.

If problems are encountered with stations not being able to program speed dial numbers, check this parameter to be sure that speed dial locations are available to the station. If the station card was installed at the time of system initialization then the blocks will have been allocated automatically.

Default Information provides the basic two digit default numbering plan for the system.
Numeric allows you to enter the storage Bin Group that you wish to assign for a station to have numeric keypad speed dialing capability.
DSS permits you to enter a storage Bin Group that you wish to assign for a station to have DSS speed dialing capability on DSS keys 1 through 10.

Note: Entry of **00** at any location (numeric or DSS) disables speed dialing for that station of the selected type.

It is possible to assign the same storage Bin Group to more than one station. If more than one station is assigned the same Bin Group, the stations that share the Bin Group will be able to program the numbers and share the ability to use them

Form 43 - Port Assignments:

Station Card #1 (Ports 11 – 18)

	01	02	03	04	Name (Optional)
43-11-					
43-12-					
43-13-					
43-14-					
43-15-					
43-16-					
43-17-					
43-18-					

Station Card #2 (Ports 21 – 28)

	01	02	03	04	Name (Optional)
43-21-					
43-22-					
43-23-					
43-24-					
43-25-					
43-26-					
43-27-					
43-28-					

Station Card #3 (Ports 31 – 38)

	01	02	03	04	Name (Optional)
43-31-					
43-32-					
43-33-					
43-34-					
43-35-					
43-36-					
43-37-					
43-38-					

Form 43-port-01 – Station Extension Number:

Any valid entry: 10-69 (2 digit)
100-699 (3 digit)   1000-6999 (4 digit)

Form 43-port-02 – Equipment Type:	(Recognized by the system Automatically)
0=No Equipment Connected	1=Digital Telephone without LCD
2=Digital Telephone with LCD	3=Hybrid function for Digital Phone with SLT adapter installed
4=Single Line Telephone	5=DSS console
6=Reserved	7=SLT music port
8=Voice Mail Port	9=Reserved
D=Doorphone	

Note: Equipment Type 8 (above) is the only item that can be programmed. All other entries are auto-detected by the system. Program equipment type 8 only when a single line circuit is connected to a voice mail port.

Form 43-port-03 – Reserved:

Form 43-port-04 – Associated Single Line Telephone:
This parameter is used on Display Digital Telephones that are equipped with an internal Single line adapter. When equipped the SLT and digital telephone may operate in conjunction with one another.
0=SLT Device operates independently from the digital telephone. No association exists between the two devices.
1=Auto call forward digital key telephone to single line telephone.
2=Enable pickup key, allowing digital telephone to capture an existing phone call from the single line telephone port.
3= Enable 1 & 2 above.

Programming Station Name. Entries may be programmed on this form. Select the STN number that you wish to program, press [CHANGE] (MIC/AT) key. During name entry, the numeric keypad keys will operate as alphabetical character keys. Each key will enter the letters that appear on the keycaps. The following table illustrates the entries that each key can make.

Note: While the keycaps on TransTel DK telephones show the letter "Q" on the 7 digit and "Z" on the 9 digit, they are in fact programmed as listed below.

Key 1 =	Q - Z - (Blank Space) – 1	Key 2 =	A - B – C - 2
Key 3 =	D - E - F – 3	Key 4 =	G - H - I - 4
Key 5 =	J - K - L – 5	Key 6 =	M - N – O - 6
Key 7 =	P - R - S – 7	Key 8 =	T - U – V - 8
Key 9 =	W - X - Y – 9	Key 0 =	(Period). - : - & - 0
Key # =	(-) - $ - #	Key * =	(Dash) - / - ! - *
DSS Key 23 = Backspace		DSS Key 24 = Forward	

Each character is indicated in order. For instance, pressing 2 will display A. Pressing it again will display B. Pressing it a third time will display C. Pressing it for the fourth time will display 2. The character that is being programmed will be underscored. Movement from character to character (left to right) is through the use of the DSS3 – (left) and DSS4 - (right) keys.

When the name is acceptable, press [SAVE] to store the name in system memory.
The **Comments** field is a forms only field and is for use by installation personnel.

Form 44 - Station Class of Service (Part 2): [G1-a10as]

Station Card #1

44-EXT--	01	02	03	04	05	06	07	08
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
Default	0	0	0	0	0	0	0	0

Station Card #2

44-EXT--	01	02	03	04	05	06	07	08
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								

Station Card #3

44-EXT--	01	02	03	04	05	06	07	08
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
Default	0	0	0	0	0	0	0	0

Form 44 continued

44-ext-01 – System Alarm Station:	
If disabled, the station will not receive system alarm clock signals	
0=Enable	1=Disable

44-ext-02 – Call Hold:	0=Hold is allowed (SLT Internal Flash)	1=Hold is not allowed (SLT devices can flash CO)

44-ext-03 – Call Split:	
If the setting is disable, the station will not be able to activate call splitting function. When activated and the station presses hook flash after placing a call on hold the call will not be retrieved. Dialing 9 (or 0) or 72 will retrieve the held call	
0=Call split allowed	1=Call split not allowed

44-ext-04 – Manual Line:	
If enabled, this options will cause a station to ring the console group when it goes off-hook.	
0=Disable	1=Enable

44-ext-05 – Headset Operation:	
If disabled, the code [775] is disabled on the telephone and the headset button will not operate. If enabled, the headset button will be operative and [775] will also activate and deactivate headset operation.	
0=Headset Mode Disabled	1=Headset Mode Enabled

44-ext-06 – Default Password (System Programming Access):	
If enabled, a station will have access to system programming. If not, the station will be unable to access system programming.	
0=Enable	1=Disable

44-ext-07 – DTMF Receiver Control for Voice mail Ports:	
This program controls the operation of DTMF detectors for each Voice mail Port. The parameter is set to free DTMF detectors quickly for systems with high Voice Mail traffic.	
0=After the Voice Mail dials the extension number, The receiver remains online until the timeout of form 05-02-02.	
1=After the Voice Mail dials the extension number, The system releases the DTMF receiver immediately	

44-ext-08 – Alarm Signaling Type (SLT and Keysets):	
This parameter determines what a station will hear when a station alarm or Wake Up Call is answered.	
0=Background Music	1=Busy Tone

44-ext-08 – Transfer Indication Type (Voice Mail extensions only): [G1-a10as]	
This parameter determines if a transferred call will display the outside caller information or *Transfer from ST:xx* (where xx is the extension number of the voice mail port).	
0=Display *Transfer from ST:xx*	1=Display Outside caller information

Form 45 - Station Class of Service (Part 3):

Station Card #1

45-STN--	01	02	03	04	05	06	07	08
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
Default	0	0	0	0	0	0	0	0

Station Card #2

45-STN--	01	02	03	04	05	06	07	08
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								

Station Card #3

45-STN--	01	02	03	04	05	06	07	08
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								

Form 45 Continued

45-ext-01 - Intercom Dialing Restriction:

If this setting is enabled, the station can not make an intercom call by dialing a station number. Under this condition, the Key Phone still can press a Flexible Key to make an intercom call or the Key Station or Analogue phones can call a station using the "Single Digit" feature.

0=Disable	1=Enable

45-ext-02 – Reserved:

45-ext-03 – Reserved:

45-ext-04-Trunk Access:

If this function is disabled then the station will be unable to access any trunks for incoming or outgoing calls.

0= Enabled - Trunk Access Allowed	1=Disabled - Trunk Access Disallowed

45-ext-05-Inter-Station Group Calling:

If this function is disabled then stations will not be able to make intercom calls outside their own station group (Form 41-st-01). This parameter is for use in tenant arrangements where each company wishes to remain totally separate although some stations can still be allowed this function, for instance a shared Receptionist.

0=Enable	1=Disable

45-ext-06. Receive Break Alarm:

If this parameter is disabled then the station will not receive the Break Alarm signal if one has been programmed in Form 39.

0 = Enabled – Receive Alarm	1 = Disable – Do not Receive Alarm

45-ext-07 - System Speed Dial Access:

If this parameter is disabled then the station will not be able to access any of the Speed Dial numbers which have been unrestricted in Mode 05-05-03/04 if they conflict with the stations toll restrictions

0= Enabled – Toll Control is bypassed for unrestricted numbers	1=Disabled - Toll Control applies to unrestricted stations.

45-ext-08 - Record Station's SMDR Data:

If this parameter is disabled then calls to and from this station will not recorded or output to the SMDR or the Mini Accounting feature. When the Mini Accounting feature is enabled (see Mode 14-01-08) then all stations which are used for administration should have this feature disabled to prevent using memory unnecessarily to record their calls. If calls are allowed to accumulate against stations which are not checked in or out regularly then the system memory buffer will become full and calls will not be recorded.

0 = Record	1 = Do not Record

Form 46 - Station Class of Service (Part 4): G1-a10av

Station Card #1

46-STN--	01	02	03	04	05	06	07	08
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
Default	0	1	0	0	0	1	2	0

Station Card #2

46-STN--	01	02	03	04	05	06	07	08
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								

Station Card #3

46-STN--	01	02	03	04	05	06	07	08
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								

Form 46 continued

46-ext-01 - Dial 87 Line Group:

If this setting is from 1 to 8, after the station dials [87], the system will automatically search for a free line which is assigned in group 1 to 8 in Program Form 38.

0=Disabled	1-8=Group Number

46-ext-02 - Message Waiting Level:

The Stations assigned higher levels can leave message for stations with the same or lower levels. Ten levels (0-9) are available (9=highest level, 0=lowest level cannot leave messages).

0=Cannot leave messages
1-9 -Able To leave messages for stations of equal or lesser Message Waiting Level

---

46-ext-03 - Automatic Answer Capability (Digital Telephone Sets):

This parameter if enabled will automatically switch on the microphone of the station if it receives an intercom call. This setting is independent of whether the system is set to voice or ring signaling for intercom calls.

0 = No	1 = MIC permanently on
2 = MIC will switch on for Intercom calls	

46-ext-03 – Caller ID to Single Line stations (Connected to TD-SLC1 card):
This enables system to send different internal CLIP(Caller ID) signals to the single line telephone

0 = Disable Caller ID	1 = Enable to send SDMF(number without name) Caller ID to the single line telephone
2 = Enable to send MDMF(number with name) Caller ID to the single line telephone	

46-ext-04 - DISA Recall Capability To Operator (No Answer/Busy):

If this parameter is enabled then when a DISA call rings an extension but the station is busy or does not answer (depending on setting) after the voice message announcing the status of the station is heard, the system will recall the operator after the assigned DISA transfer time. Using settings 1 to 3 the called station will continue to ring until the console answers the call. Using Settings 5 to 7 the call will ring the station for 1 cycle (Form 05-08-06) and then camp on to the console only and cease to ring the called station. If the parameter is set to 0 then the call will stay at the station until answered or terminated.

0=No Recall to Operator	1=Recall on No Answer
2=Recall on Busy	3= Recall on Busy and No Answer
5=Recall on No Answer (Forwarding station stops ringing)	6=Recall on Busy and Stop Busy Remind Tone at Forwarding Station
7= Recall to Operator on No Answer/Busy (Stop Notification at Forwarding Station)	

46-ext-05 - Maximum Transfer Times:

This feature allows the user or the automatic attendant console to re-transfer the same call for the number of times set in this parameter.

0 = No Limit	1 = Allow 6 times	2 = Allow 7 times	3 = Allow 8 times
4 = Allow 9 times	5 = Allow 10 times	6 = Allow 11 times	7 = Allow 12 time
8 = Allow 13 times	9 = Allow 14 times		

46-ext-06 - Door Unlock/DND/CFWD Access:

	0	1	2	3	4	5	6	7
Door Unlock	Disallow	Allow	Disallow	Allow	Disallow	Allow	Disallow	Allow
DND	Disallow	Disallow	Allow	Allow	Disallow	Disallow	Allow	Allow
CFWD	Disallow	Disallow	Disallow	Disallow	Allow	Allow	Allow	Allow

46-ext-07 - Call Forward No-Answer to a Pre-assigned Hunting Group (Keysets and Single Line Sets):

This parameter allows Call forward no answer to the pre-assigned hunting group. This parameter will not be disabled if the user enables or disables the "Personal Call Forward" function, but will be temporarily overridden. If the user has set the Personal Call Forward to some specified number, system will use "Personal Call Forward" rule first. When the user disables Personal Call Forward, this option will once again go into effect.

0=Disable	1-9=Forward to Hunt Group 1-9

46-ext-07 – ACP Ring to a Pre-assigned Hunting Group (ACP only):

This parameter determine what station(s) will ring when an ACP doorbell button is pressed. Please note the difference in ringing assignments when an ACP is connected..

0=Hunt Group 1	1=Hunt Group 2	2=Hunt Group 3
3=Hunt Group 4	4=Hunt Group 5	5=Hunt Group 6
6=Hunt Group 7	7=Hunt Group 8	8=Hunt Group 9
9=Hunt Group 10	d=Use Form 03 ("d"=DND/CN key during system programming) [G1-a10aw]	

46-ext-08 – Single Line Ringing Type: [G1-a10-ar]

Determines the ringing cadence on Single line phones

0 = Ring double ring for Intercom calls and single ring for external (trunk) calls	
1 = Single ring – All calls	2 = Double ring – All Calls

Form 47 - Hot Line Table:					
STN	SPD? (Y/N)	Location (Number)	STN	SPD? (Y/N)	Location (Number)

This feature allows a user to lift the handset and directly call a specific outside party through System Speed Dial or an Intercom Extension without dialing any digits.

> * Pressing **[SPK]** on a Keyphone allows the Hot line to be over-ridden.

Description:
1. Enter a System Speed Dial Number for an outgoing call or a Station Number for an Intercom call.

Example:

47-**15** HOT LINE
SPD:101

15 = Station No. (3 digits)
7 Speed Dial 101 (for example: 9415010)

When the user lifts the handset, the System will automatically call 9415010 through System Speed Dial 101.

2. Press **[Change]** to select a hot line Intercom. (Press again 6 back to SPD assignment), the display shows:

47-15 HOT LINE
00

●   Enter an Extension number **18**

47-550 HOT LINE
18

●   The system calls Extension **18** when the handset is lifted.

The Hot Line is the recommended method of connecting a Fax machine to the system. Use a spare analogue port and make the Fax extension a Hot Line to an unused Speed Dial number and allocate the fax line to be used by that Speed Dial. Do not program any number into the Speed Dial. When the fax goes off hook it will select the Fax line and then wait for the Fax to dial the number required.

Form 50 - Station Class of Service (Part 5):

Station Card #1

50-STN--	01	02	03	04	05	06	07	08
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
Default	0	1	0	0	0	1	2	0

Station Card #2

50-STN--	01	02	03	04	05	06	07	08
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								

Station Card #3

50-STN--	01	02	03	04	05	06	07	08
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								
50-_____								

50-ext-01 – Digital Doorphone/ACP Intrusion Alarm: [G1-a10ar]

When enabled, this parameter will cause an alarm condition on all stations if the ACP is disconnected or is opened.
Dial [777] from a system console to stop this alarm.
Note: This must be enabled on the DigitalDoorphone/ACP in order to provide the latch alarm. 39-ACP-01
must also be set to a value of 00.

0 = Intrusion Alarm Disabled	1 = Intrusion Alarm Enabled

50-ext-02 – Call Forward Indication:

This function enables or disables indication of call forwarding on the SPK button.

0 = Disable	1 = Enable

50-ext-03 - ISDN Incoming Call Display Type:

This parameter selects what will be displayed on the screen of an LCD phone when an incoming call is received, either the Caller ID number or the ISDN Indial number. Caller ID on CO lines requires optional equipment to be installed. This will also select what will be displayed on the SMDR output for incoming calls. This setting also allows the naming of indials or Caller ID numbers using System Speed Dial Name / numbers. If this setting is a 1 then when an incoming call with Caller ID or an Indial number rings the TD-824i will search the System Speed dials and if this number is entered then the name associated with it will be displayed on the screen.

0 = Caller ID / Name	1 = ISDN Indial Number / Name

50-ext-04 CTI-Extension Status Report:

If enabled this parameter will output the extension status report for CTI application.

0 = Disable	1 = Enable

50-ext-05 – Voice Mail Auto Logon Function

0 = EnableVoice Mail Auto Log On String	1 = Disable Voice Mail Auto Log On String

50-ext-06 – ACP/TD-DPU1 Door Lock Relay:

This parameter selects either the ACP/DPU1 relay to be activated or the relay on the MSC card inside the KSU.

0 = Use ACP/DPU1 Relay	1 = Use G1-MSC Relay (Form 06-00 needs to be set to 2)

50-ext-07 – ACP Door Control Security:

This parameter selects the type of security used for local door relay control.

0 = Use RF Proximity Card **OR** Password	1 = Use RF Proximity card AND Password

50-ext-08 – ACP Function

0 = Used as a doorphone	1 = Wall Mount Digital Phone (dial 9 access, intercom calling allowed)

Toll Control Forms

Forms 51 through 56 set exceptions (allow) to rules defined in corresponding forms 61 through 66.   Form 51 & 61 correspond to toll class setting 1 as per Form 18 of the Td-824i. Forms 52 & 62 correspond to toll class setting 2, through forms 56 & 66, which correspond to a setting of 6 on form 18.

Forms 57 through 59 are allow tables which provide for exceptions to complete toll restriction. There are no corresponding forms to 57 through 59. If nothing is programmed on form 57, any station subject to toll class 7 will be restricted from placing any calls on a CO line. Forms 58 & 59 act in a like manner with respect to toll classes 8 & 9.

Description:

There are 16 codes for each Toll Class and each code contains up to 12 digits

In the table below, the Class column refers to the class programming done on Form 18 of the TD-824i.

Toll Classes:

Class	Function	Prog. Form
0	Unrestricted	Default
1	Use Form 51 for the Unrestricted numbers. Use Form 61 for the Restricted numbers	Form **51,61**
2	Use Form 52 for the Unrestricted numbers. Use Form 62 for the Restricted numbers	Form **52,62**
3	Use Form 53 for the Unrestricted numbers. Use Form 63 for the Restricted numbers	Form **53,63**
4	Use Form 54 for the Unrestricted numbers. Use Form 64 for the Restricted numbers	Form **54,64**
5	Use Form 55 for the Unrestricted numbers. Use Form 65 for the Restricted numbers	Form **55,65**
6	Use Form 56 for the Unrestricted numbers. Use Form 66 for the Restricted numbers	Form **56,66**
7	Use Form 57 for the Unrestricted numbers.	Form **57**
8	Use Form 58 for the Unrestricted numbers.	Form **58**
9	Use Form 59 for the Unrestricted numbers.	Form **59**
*	Use Form 51-56 for unrestricted numbers. Use Form 61-66 for all restricted numbers	000
D	**Cannot access the trunk line.**	

Note 1: Default numbers in Form 61, 62, 63, 65, 66 are: dddddddd
Note 2: Default numbers in Form 51, 52, 53, 55, 56, 57, 58, 59 are:------------
Note 3: d: Don't care: any digit is allowed in this position.
Note 4: _: The system does not allow any digits dialed after this symbol.

Form 51 - Exception (Allow) Tables:		Form 61 - Deny Tables:	
Entry Number	Actual Entry (Up to 12 digits in Length)	Entry Number	Actual Entry (Up to 12 digits in Length)
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	

Form 51 - Notes

Entries on Form 51 provide exception (allowances) to a condition that is restricted on Form 61.

In default any station allocated to Toll Plan 1 will be able to dial unrestricted until the associated forms are programmed.
Valid entries in this form are 0 to 9, d and _.
   d = Don't care and means that any digit can be dialed in this position. _
   = No digit is allowed to be dialed beyond this position.
If a digit is allowed as the beginning of a number then the entry should be filled with don't care's to the end of the line or the caller will not be able to dial the full number.

Form 61 - Notes

Entries on this form provide dialing restrictions to a telephone subject to this toll plan.   If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 51. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 51 to see if a valid exception exists.

An entry of "1d" will cause the system to check Form 52 for an exception of 1+additional digits. If an exception is found on Form 52, the call will be allowed. If an exception is not found, the call will be restricted.
An entry of 1d on Form 62 will check Form 52 for any exceptions. If 1800ddddddd is found, all 1+ dialing will be denied, except for 1-800 calls.

Form 52 - Exception (Allow) Tables:		Form 62 - Deny Tables:	
Entry Number	Actual Entry (Up to 12 digits in Length)	Entry Number	Actual Entry (Up to 12 digits in Length)
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	

Form 52 Notes

Entries on Form 52 provide exception (allowances) to a condition that is restricted on Form 62.

In default any station allocated to Toll Plan 2 will be able to dial unrestricted until the associated forms are programmed.
Valid entries in this form are 0 to 9, d and _.

> d = Don't care and means that any digit can be dialed in this position. _
> = No digit is allowed to be dialed beyond this position.

If a digit is allowed as the beginning of a number then the entry should be filled with don't care's to the end of the line or the caller will not be able to dial the full number.

Form 62 Notes

Entries on this form provide dialing restrictions to a telephone subject to this toll plan.   If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 52. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 52 to see if a valid exception exists.

An entry of "1d" will cause the system to check Form 52 for an exception of 1+additional digits. If an exception is found on Form 52, the call will be allowed. If an exception is not found, the call will be restricted.
An entry of 1d on Form 62 will check Form 52 for any exceptions. If 1800ddddddddd is found, all 1+ dialing will be denied, except for 1-800 calls.

Form 53 - Exception (Allow) Tables:		Form 63 - Deny Tables:	
Entry Number	Actual Entry (Up to 12 digits in Length)	Entry Number	Actual Entry (Up to 12 digits in Length)
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	

Form 53 Notes

Entries on Form 53 provide exception (allowances) to a condition that is restricted on Form 63.

In default any station allocated to Toll Plan 3 will be able to dial unrestricted until the associated forms are programmed.
Valid entries in this form are 0 to 9, d and _.
    d = Don't care and means that any digit can be dialed in this position. _
    = No digit is allowed to be dialed beyond this position.
If a digit is allowed as the beginning of a number then the entry should be filled with don't care's to the end of the line or the caller will not be able to dial the full number.

Form 63 Notes

Entries on this form provide dialing restrictions to a telephone subject to this toll plan.   If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 53. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 53 to see if a valid exception exists.

An entry of "1d" will cause the system to check Form 53 for an exception of 1+additional digits. If an exception is found on Form 53, the call will be allowed. If an exception is not found, the call will be restricted.
An entry of 1d on Form 63 will check Form 53 for any exceptions. If 1800dddddddd is found, all 1+ dialing will be denied, except for 1-800 calls.

Form 54 - Exception (Allow) Tables:		Form 64 - Deny Tables:	
Entry Number	Actual Entry (Up to 12 digits in Length)	Entry Number	Actual Entry (Up to 12 digits in Length)
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	

Form 54 Notes

Entries on Form 54 provide exception (allowances) to a condition that is restricted on Form 64.

In default any station allocated to Toll Plan 4 will be able to dial unrestricted until the associated forms are programmed.
Valid entries in this form are 0 to 9, d and _.

        d = Don't care and means that any digit can be dialed in this position. _
        = No digit is allowed to be dialed beyond this position.
If a digit is allowed as the beginning of a number then the entry should be filled with don't care's to the end of the line or the caller will not be able to dial the full number.

Form 64 Notes

Entries on this form provide dialing restrictions to a telephone subject to this toll plan.   If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 54. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 54 to see if a valid exception exists.

An entry of "1d" will cause the system to check Form 54 for an exception of 1+additional digits. If an exception is found on Form 54, the call will be allowed. If an exception is not found, the call will be restricted.
An entry of 1d on Form 64 will check Form 54 for any exceptions. If 1800ddddddd is found, all 1+ dialing will be denied, except for 1-800 calls.

Form 55 - Exception (Allow) Tables:		Form 65 - Deny Tables:	
Entry Number	Actual Entry (Up to 12 digits in Length)	Entry Number	Actual Entry (Up to 12 digits in Length)
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	

Form 55 Notes

Entries on Form 55 provide exception (allowances) to a condition that is restricted on Form 65

In default any station allocated to Toll Plan 5 will be able to dial unrestricted until the associated forms are programmed.
Valid entries in this form are 0 to 9, d and _.
> d = Don't care and means that any digit can be dialed in this position. _
> = No digit is allowed to be dialed beyond this position.
If a digit is allowed as the beginning of a number then the entry should be filled with don't care's to the end of the line or the caller will not be able to dial the full number.

Form 65 Notes

Entries on this form provide dialing restrictions to a telephone subject to this toll plan.   If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 55. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 55 to see if a valid exception exists.

An entry of "1d" will cause the system to check Form 55 for an exception of 1+additional digits. If an exception is found on Form 55, the call will be allowed. If an exception is not found, the call will be restricted.
An entry of 1d on Form 65 will check Form 55 for any exceptions. If 1800dddddddd is found, all 1+ dialing will be denied, except for 1-800 calls.

Form 56 - Exception (Allow) Tables:		Form 66 - Deny Tables:	
Entry Number	Actual Entry (Up to 12 digits in Length)	Entry Number	Actual Entry (Up to 12 digits in Length)
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	

Form 56 Notes

Entries on Form 56 provide exception (allowances) to a condition that is restricted on Form 66

In default any station allocated to Toll Plan 6 will be able to dial unrestricted until the associated forms are programmed.
Valid entries in this form are 0 to 9, d and _.

> d = Don't care and means that any digit can be dialed in this position. _
> = No digit is allowed to be dialed beyond this position.

If a digit is allowed as the beginning of a number then the entry should be filled with don't care's to the end of the line or the caller will not be able to dial the full number.

Form 66 Notes

Entries on this form provide dialing restrictions to a telephone subject to this toll plan.   If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 56. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 56 to see if a valid exception exists.

An entry of "1d" will cause the system to check Form 56 for an exception of 1+additional digits. If an exception is found on Form 56, the call will be allowed. If an exception is not found, the call will be restricted.
An entry of 1d on Form 66 will check Form 56 for any exceptions. If 1800dddddddd is found, all 1+ dialing will be denied, except for 1-800 calls.

Form 57 - Exception (Allow) Tables:		Form 58 - Exception (Allow) Tables:	
Entry Number	Actual Entry (Up to 12 digits in Length)	Entry Number	Actual Entry (Up to 12 digits in Length)
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	

Form 59 - Exception (Allow) Tables:

Entry Number	Actual Entry (Up to 12 digits in Length)	Entry Number	Actual Entry (Up to 12 digits in Length)
01		09	
02		10	
03		11	
04		12	
05		13	
06		14	
07		15	
08		16	

Toll Control Examples

This example is based on a location where 911 is enabled and all local calls are placed by dialing a 7 digit number. The customer wants calls only allowed to 911 and 1-800, 1-888 and 1-877.

Set Form 41-11-05/06 = 7
When this form is set and Form 57 is still at default then station 11 will be totally restricted.
Set form 57 to the following,

       Form 57-01 = 911dddddddd
       Form 57-02 = 1800dddddddd
       Form 57-03 = 1888dddddddd
       Form 57-04 = 1877dddddddd

Station 11 will now be only able to dial:
       911
       1-800-xxx-xxxx
       1-888-xxx-xxxx
       1-877-xxx-xxxx

Example 2
All except 0 and 1 plus, but allow 1-800, 1-888, 1-877.
Set Mode 41-11-05/06 = 1
When this mode is set and Mode 51 and 61are still at default then station 11 will be unrestricted.
Set Mode 61 to the following,

       Mode 61-01 = 0 (remove all trailing d digits)
       Mode 61-02 = 1dddddddddddd

Station 11 will now be only able to dial numbers beginning with digits 2 through 9.

       Mode 52-01 = 1800dddddddd
       Mode 52-02 = 1888dddddddd
       Mode 52-03 = 1877dddddddd
Station 11 can now dial calls beginning with 1-800, 1-888 and 1-877.

Form 67 - Hunt Group Pilot Assignment:

67-grp

Group Num.	Pilot Number	Hunt Type	Group Num.	Pilot Number	Hunt Type
01			02		
03			04		
05			06		
07			08		
09			10		

General:

This program sets Pilot Numbers for Hunting Groups 1 to 10.

Description:

There are 10 Hunt Groups available in the TD-824i. Each Hunt Group is assigned a Pilot Number in this form. The pilot number can be any valid unused number and will have the same number of digits as the station-numbering scheme used in the system (2, 3 or 4).

Hunt group pilots can be assigned to be rung from Single Digit DISA.

Once Hunting Ring Type is enabled in Form 67-GP (individual) or 05-06-08 (system wide) ringing this pilot number will access the stations in the group according to the ringing method selected and the order in which they are programmed in Mode 68 (Day) and Mode 69 (Night). Each Hunt Group can be from 1 to 5 stations in the TD-824i.

There are 3 types of Ring available, Common Audible, Linear and Circular.   These can be controlled on a per hunt group basis or a system wide basis.

If Common Audible is enabled, then calling the pilot number will ring all available stations programmed on Form 68 (Day Service) or 69 (Night Service).

If Linear Ring is enabled then calling the pilot number will always call the first available station in the order in which they are programmed in Form 68 or 69.

If Circular Ring is enabled then the stations will be called one after the other for each succeeding call until all have taken a call and then the Ring will revert to the beginning of the Ring assignment and then repeat the process.

Stations can remove themselves from receiving Hunt calls by using the DND key but this will also prevent them from receiving direct calls.

It is still possible to call each station in the Hunting group directly by dialing it's own individual station number.

If a station in a Hunt Group has set call forward to a station or another Hunt Group (for instance Voice Mail Group) then only direct calls to the station will be forwarded. *If Hunt calls come to the station and it is call forwarded it will still ring for the call.*

Pilot Number Indicates the Access Code that must be dialed to reach the Hunt Group. It must be a unique number (it cannot be the same as an extension). It must be within the range of valid numbers for extensions (2 digit numbering plan 10-69, 3 digit numbering plan 100-699, 4 digit numbering plan 1000-6999).

The hunt type is   0 for common ring,1 for linear and 2 for circular

Form 68 - Day Hunt group assignments:

Group Number	1st Member	2nd Member	3rd Member	4th Member	5th Member
Group 01					
Group 02					
Group 03					
Group 04					
Group 05					
Group 06					
Group 07					
Group 08					
Group 09					
Group 10					

Entries on Form 68 must be valid extension numbers. Extensions can be entered in any order.

General:
This program sets Stations into Hunting Groups 1 to 10 for the TD-824I assigns the order in which they will be accessed during Daytime.

Description:
There are 10 Hunt Groups available and 5 stations can be assigned into each group for Day and 5 for Nighttime.

There are 3 types of Ring available, Linear and Circular.

If Linear Ring is enabled then calling the pilot number will always call the first available station in the order in which they are programmed in Mode 68 or 69.

If Circular Ring is enabled then the stations will be called one after the other for each succeeding call until all have taken a call and then the Ring will revert to the beginning of the Ring assignment and then repeat the process.

It is still possible to call each station in the Hunting group directly by dialing its own individual station number.

Form 69 - Night Hunt group assignments:					
Group Number	1st Member	2nd Member	3rd Member	4th Member	5th Member
Group 01					
Group 02					
Group 03					
Group 04					
Group 05					
Group 06					
Group 07					
Group 08					
Group 09					
Group 10					

Entries on Form 69 must be valid extension numbers. Extensions can be entered in any order.

General:
This program sets Stations into Hunting Groups 1 to 10 for the TD-824I assigns the order in which they will be accessed during Nighttime.

Description:
There are 10 Hunt Groups available and 5 stations can be assigned into each group for Day and 5 for Nighttime.

There are 2 types of Ring available, Linear and Circular.

If Linear Ring is enabled then calling the pilot number will always call the first available station in the order in which they are programmed in Mode 68 or 69.

If Circular Ring is enabled then the stations will be called one after the other for each succeeding call until all have taken a call and then the Ring will revert to the beginning of the Ring assignment and then repeat the process.

It is still possible to call each station in the Hunting group directly by dialing its own individual station number.

Form 70-Cd - ISDN Interface Specifications Program:			
	IDSN=01	ISDN=02	ISDN=03
Cd=01 (Default=1)			
Cd=02 (Default=0)			
Cd=03 (Default=1)			
Cd=04 (Default=0)			

General:

Assigns the ISDN interface to either "S" interface or "T" interface.

Description:

Cd= 01 is to assign the "S" or "T" interface for the ISDN port on G1-SIU card.
  0= "S" interface. It can connect two ISDN devices. Use Program 43-CN to set the Device
    Station Number (Station Type is 9).
  1= "T" interface. It can be connected to "NT" interface of ISDN line.

Cd= 02 is for the test purpose. Only for approval
  0= Loopback disabled
  1= Loopback enabled

Cd= 03 is for connection method
  0= Point to Point
    (recommend '0' for internal ISDN S interface use if only one ISDN device connected)
  1= Point to Multi-point
  2= Point to Multi-point and ignore the unknown MSN or DDI number (not assigned in mode 72)

This application is normally for other ISDN devices (e.g. ISDN TA, ISDN video conference, ISDN card, …) that are hooked on NT1 with TD-824I together.

Cd= 04 is for ISDN PLL (Phase Loop Lock)
  0= Auto detect
  1= Lock this ISDN line for PLL. Signal.

Form 71-tk - ISDN Line Number Assignment Program:

This form allows you to assign an identifying number to each B Channel of an ISDN line. Tk 01 and 02 correspond to ISDN circuit #1. Tk 03 and 04 correspond to ISDN circuit #2. Tk 05 and 06 correspond to ISDN circuit #3. A maximum of 12 digits can be assigned.

01	
02	
03	
04	
05	
06	

Example:

71-04 SIU NUMBER
2961135ddddd

Assign an identifying number 2961135 to the 2nd B-channel of the 2nd ISDN S/T interface.

Form 72 - ISDN Called Party Extension Number Assignment:

This form is not currently implemented in the North American version of TD-824i.

Form 73-st - ISDN Extension Sub Address Assignment:
This form is not currently implemented in North American systems

Form 74 - Least Cost Routing - Digit String Analysis Table:

Numbers entered here are used for routing analysis. Up to 10 digits may be analyzed
Item numbers range from 001 through 500
Entries can be up to 10 digits in length
Route Tables Range from 01-20

Item	Entry	Route Table	Item	Entry	Route Table
74- __01			74- __26		
74- __02			74- __27		
74- __03			74- __28		
74- __04			74- __29		
74- __05			74- __30		
74- __06			74- __31		
74- __07			74- __32		
74- __08			74- __33		
74- __09			74- __34		
74- __10			74- __35		
74- __11			74- __36		
74- __12			74- __37		
74- __13			74- __38		
74- __14			74- __39		
74- __15			74- __40		
74- __16			74- __41		
74- __17			74- __42		
74- __18			74- __43		
74- __19			74- __44		
74- __10			74- __45		
74- __2			74- __46		
74- __22			74- __47		
74- __23			74- __48		
74- __24			74- __49		
74- __25			74- __50		

Dialed digits can be 0~9, *, #. 'd' is the wildcards. '-' means no digit.
Routing Tables 01 through 20 are programmed on Form 76.

Form 74 - Least Cost Routing - Digit String Analysis Table:

Numbers entered here are used for routing analysis. Up to 10 digits may be analyzed
Item numbers range from 001 through 500
Entries can be up to 10 digits in length
Route Tables Range from 01-20

Item	Entry	Route Table	Item	Entry	Route Table
74- __51			74- __76		
74- __52			74- __77		
74- __53			74- __78		
74- __54			74- __79		
74- __55			74- __80		
74- __56			74- __81		
74- __57			74- __82		
74- __58			74- __83		
74- __59			74- __84		
74- __60			74- __85		
74- __61			74- __86		
74- __62			74- __87		
74- __63			74- __88		
74- __64			74- __89		
74- __65			74- __90		
74- __66			74- __91		
74- __67			74- __92		
74- __68			74- __93		
74- __69			74- __94		
74- __70			74- __95		
74- __71			74- __96		
74- __72			74- __97		
74- __73			74- __98		
74- __74			74- __99		
74- __75			74- __00		

Dialed digits can be 0~9, *, #. 'd' is the wildcards. '-' means no digit.
Routing Tables 01 through 20 are programmed on Form 76.

Form 76 - Least Cost Routing - Routing Table Normal Operation:

This form determines the 20 Routing Tables that will be used during normal operation

Table Number	Start Time (2 digits)	End Time (2 digits)	First Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Second Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Third Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Fourth Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Form 76 - Least Cost Routing - Routing Table Special Day Rate:
This form determines the 20 Routing Tables that will be used during Special Day Rate (05-13-07) Operation

Table Number	Start Time (2 digits)	End Time (2 digits)	First Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Second Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Third Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Fourth Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										

Form 76 - Least Cost Routing - Routing Table Second Special Rate Day Operation:

This form determines the 20 Routing Tables that will be used during normal operation

Table Number	Start Time (2 digits)	End Time (2 digits)	First Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Second Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Third Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)	Fourth Trunk Group Preference (1 digit)	Modify Digits Table (2 digits)
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										

Description:

20 routing tables can be used for each rate period (Normal – Special Day – Second Special Day)
3 time schedules can be assigned for each routing table.
4 priority trunk groups can be assigned for each routing table.
4 modifying tables can be assigned for each routing table.
For weekly holiday, the system will refer to 76-(21~40).
For weekly weekend, the system will refer to 76-(41~60).
Start time and end time will occur on the hour.
If a route table is to run 24 hours a day, the start time will be 00 and the end time will be 00.

In each routing table, you may program up to 4 trunk groups to route the call. Each trunk group may have a modify digits table associated with it if digits dialed into the TD-824i must be changed before they are sent over a trunk.

Form 77-num - Least Cost Routing - Modify Digits Table:

System will delete the first nn digits (from 01 – 10) and then added the assigned digits in the front of the dialed numbers. Digits are deleted from the left most side of the dialing string.

The added digits could be 0~9, *, #, p, T.

'd' is the wildcard. '-' means no digit.

'p' is the pause character.

'T' means to chain next modify digits table with current one for long digit string. For applications where more than 10 digits must be added to a targeted telephone number.

An entry will consist of two digits (which tells the TD-824i how many digits to delete). Valid range of entries is 00 ~ 10 .

The remaining portion of the entry is the actual digit string that must be inserted into a dial string. Exmples follow the programming tables.

Entry num	Digits to delete	Digits to Insert (Up to 10 digits)	Entry num	Digits to delete	Digits to Insert (Up to 10 digits)
01			26		
02			27		
03			28		
04			29		
05			30		
06			31		
07			32		
08			33		
09			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Form 77-num – Least Cost Routing – Modify Digits Table (continued):

Entry num	Digits to delete	Digits to Insert (Up to 10 digits)	Entry num	Digits to delete	Digits to Insert (Up to 10 digits)
51			76		
52			77		
53			78		
54			79		
55			80		
56			81		
57			82		
58			83		
59			84		
60			85		
61			86		
62			87		
63			88		
64			89		
65			90		
66			91		
67			92		
68			93		
69			94		
70			95		
71			96		
72			97		
73			98		
74			99		
75					

Example:

A user dials 1-919-345-6789. In this example, we want to route this call via 1010-220, an alternate carrier.
The LCR routes it to a trunk group and modify digits table 01. Table 01 will be programmed as follows:

```
77-01  01   Mod Tab
00  1010220ddd
```

The modify digits table will not remove any digits (first two digits are 00) and it will add 1010220 before the entered dial string, so the resulting digit

Example 2:
A customer has local lines and a Foreign Exchange (FX) into a town just across the state line (and in another area code). He wants to make sure calls to the other town always go over the FX.
The telephone numbers for the next town use 5 different central office codes, 541 through 545. The area code for the next town is 838. Most of his office staff is used to dialing the next town from home and they pick up the phone and dial 1-838-541-1234 (for example).
The TD-824i is programmed to take this digit string and make sure it gets on the FX line, which is in trunk group 2. Modify digits table 06 is to be used as a reference in this example.

To allow the call to go out over the FX, we will need to remove the 1 plus the area code, so the digits to delete field will be programmed to remove 4 digits (1838). That leaves 541-1234 remaining. This digit string is what is required to dial on the FX, so we do not add any digits to it.

```
7 7 - 0 6   0 1    M o d   T a b
0 4    d d d d d d d d d
```

Example 3:
The system is installed in a branch office in the suburbs. The main headquarters downtown has provided an OPX circuit that acts as a station off the headquarters' telephone system. To reach anyone at headquarters, all someone in the suburbs office has to do is access the OPX (which appears as a CO trunk on the TD-824i) and dial an extension number. However a number of employees still access a CO line and dial the company's main number downtown. This ties up a CO line in the suburban office and another one at main headquarters. The company wants any calls made to the main HQ office to instead go over the OPX circuit to HQ. The number is a local call. The telephone number is 638-8923.

To make this work, we will tell the system in Form 75-01 to recognize 638-8923 and to use route table 11.

```
7 5 - 0 0 1   0 1   D g   T a b
6 3 8 8 9 2 3 - - -      1 1
```

On Form 76-11, we will tell the system to use trunk group 3 and modify digits plan 2.

```
7 6 - 0 1    A         R o u    T a b
00 00 3 02 0 00 0 00 0 00
```

Note: Display will not show all this information onscreen at one time. As you enter information, display will scroll off to the left, showing further entries on the right.

On Form 77-03, we will program the system to delete all 7 of the digits dialed (638-8923) and replace it with 0 (zero) to ring the operators' station.

```
7 7 - 0 3   0 1    M o d   T a b
0 7    0 d d d d d d d d
```

Example 3A:
After the system has been in a while, the customer wants to be able to call HQ using the local lines if the OPX is busy.
We will add to Form 76-01. On it we will make trunk group 1 the second choice. Since the digits need no modification from the 7 that are dialed into the TD-824i, we do not need to assign a modify digits table.

```
7 6 - 0 1    A         R o u    T a b
00 00 3 02 1 00 0 00 0 00
```

Form 78 - Station Class of Service (Part 6): G1-a20u

Station Card #1

78-STN--	01	02	03	04	05	06	07	08
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
Default	0	1	0	0	0	1	2	0

Station Card #2

78-STN--	01	02	03	04	05	06	07	08
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								

Station Card #3

78-STN--	01	02	03	04	05	06	07	08
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								
78-_____								

Description:

Form 78-ext-01 - Least Cost Routing Access Level:	
This parameter assigns the LCR routing level for each station.	
0 = Disable LCR	1 = Allow this station to use the 1st priority trunk group only
2 = Allow this station to use the 1st and the 2nd priority trunk groups only	3 = Allow this station to use the 1st~3rd priority trunk groups only
4 = Allow this station to use the 1st~4th priority trunk groups	5 = Allow this station to use the 1st~4th priority trunk groups. If there is not any available trunk in the 1st~4th priority trunk groups, system will allow this station to use the normal assigned dial 9 group.

Form 78-ext-02 - LCR - Direct Access a Trunk:
This parameter allows a station to select a trunk directly under LCR environment. If you wish to force users to use LCR, this option must be set to 0 (disable direct trunk access).
0 = Do not allow to access a trunk directly (need to dial 9 (or 0) first).
1 = Allow this station to access a trunk directly (by pressing line key button).

Form 78-ext-03 - 1A2 Emulation (Station Programming):		
When extension talks with a trunk, the other extension can make a conference by pressing this Trunk's button if the 1A2 Emulation is allowed.		
0 = No Access	1 = Access with tone notification	2 = Access without tone notification

1A2 Emulation status is setting below:

29-Tk-06	78-St-03	Status
0	N/A	No access
1	0	No access
1	1	access with tone
1	2	access with no tone

Even if 1A2 Emulation status is programmed, an extension can temporarily disable it by pressing the Function key: [1A2 Emulation Privacy] – (FN:24 for DSS key in mode 07). When an extension sets 1A2 Emulation Privacy, the key LED will light, and other extensions will not be able to access the line in use. When the extension presses [1A2-Emulation Privacy] again 1A2 Emulation Privacy is cancelled and the LED will extinguish.

Form 78-ext-04 - Call Forward Busy to a Pre-assigned Hunting Group (Keysets and Single Line Sets):	
This parameter allows Call forward busy to the pre-assigned hunting group. This parameter will not be disabled if the user enables or disables the "Personal Call Forward" function, but will be temporarily overridden. If the user has set the Personal Call Forward to some specified number, system will use "Personal Call Forward" rule first. When the user disables Personal Call Forward, this option will once again go into effect.	
0=Disable	1-9=Forward to Hunt Group 1-9

Form 78-ext-05 – Reserved:

Form 78-ext-06 – Reserved:

Form 78-ext-07 – Auto Connect to Ringing Line: [G1-a20u]

When set to 0 (Default) a station that is ringing on an incoming CO trunk is automatically connected to the station when the handset is lifted or the SPKR button is pressed. When set to 1, Auto Answer is disabled and the station will need to press the key associated with the ringing line in order to answer the call.

0=Auto Connect Enabled (Default)	1= Auto Connect Disabled

Form 78-ext-08 – Reserved:

Caller ID and Redial Patterns

The bulk of programming necessary for addition of the Caller ID device is to implement Redial capabilities on identified calls. This is an issue that has kept most telephone manufacturers from incorporating redial on telephone systems equipped with Caller ID. Software shipped with the TD-824i properly addresses what we believe to be all the possible dialing situations in North America.

However, in order to properly program the Caller ID redial capabilities, you must understand what your local telephone company (telco) expects for each call that you dial.

The information (digits that must be dialed) will vary depending on your local telco's requirements. Unfortunately there is no "one size fits all" configuration that will work. Each system must be custom tailored to the particular dialing patterns at the site. The following section is designed to explain the possible variants you may encounter during installation.

U.S. Caller ID Overview

Caller ID is delivered to telephone lines in the U.S. containing 10 digits (conforming to the North American Numbering Plan) which consist of *NXX-NXX-XXXX*, where *N* is a digit from 2 through 9 and *X* is any digit from 0 through 9.

For reference through this section:

- The (**NXX)**-NXX-XXXX of the number is referred to as the **Area Code.**

- The NXX-**(NXX)**-XXXX is referred to as the **Office Code.**

- The NXX-NXX-**(XXXX)** is referred to as the **Subscriber Number.**

This applies to both local and toll calls.

Caller ID delivers the entire NXX-NXX-XXXX to a Caller Id subscriber or it delivers a code indicating the unavailability of Caller ID information. Caller ID is <u>never</u> abbreviated to less than 10 digits.

Various North American Dialing sequences

1. Local Call (7 digit)

In most areas, local calls are a 7 digit number, which consist of the 7 right-most digits. The Area Code (the first NXX) is not used.

TransTel Communications, telephone number is Area Code 561, the Office Code is 747 and our Subscriber Number is 4466.

Another telephone user within our local dialing area will dial only 747-4466. This is the only dialing string the local telco will accept.

For example: If I receive a call from the business next door, my caller ID unit will display 561-555-3489. In order to redial the call, I must dial 555 + 3489. It will be necessary to program the TD-824i to recognize that the 561-555 area code and office code combination is local and will disregard the area code and dial only the office code and subscriber number (555+3489).

In order to make the TD-824i redial this number properly, set **Form 84-01-01 with a value of 561** (Home Area Code). You will also set **Form 86-555 to a value of 0**. This tells the TD-824i when it sees the area code of 561 AND the office code of 555, the redial function will be to dial only the office code and subscriber number (555+3489).

2. Local Toll (7 digit)

Some localities (a good example is the state of Maine, in the northeastern U.S.) allows 7 digit dialing to the entire state, even though some calls are billed at toll rates. So a caller ID report from a telephone in the state of Maine to another telephone in the state of Maine will show *207 234 5678*. However if a caller ID machine is going to provide redial capabilities, it must remove the area code 207 and dial only *234 5678.*

For example: If I receive a call from the company across the state, my caller ID unit will display 207-234-5678. In order to redial the call, I must dial 234 + 5678.

In this example , set **Program 84-01-01 with a value of 207** (Home Area Code). You will also set **Program 86-200 through 86-999 to a value of 0**. With this programming, whenever a number begins with the area code 207 the redial function will only dial the office code and subscriber number (7 digits).
Note: The default database already has 86-200 through 86-999 set to 0.

3. Local Call (10 digit)

Some larger cities in the United States have exhausted an entire area code. Miami, Florida is a good example of this. Instead of separating portions of Miami and assigning unique area codes to different geographic regions, the telco has instead introduced an "overlay" area code. There are two area codes that cover the same geographic area. In this situation, all local calls must dial *NXX-NXX-XXXX* for all local calls.

For example: I receive a call from the business next door. My caller ID unit displays 305-471-9091. To redial the number I dial 305 + 471 + 9091.

This situation requires that you set **Program 85-01-01** to a value of 305. The TD-824i supports up to a total of 5 "overlay" codes, so other overlay codes will be programmed on 85-02-01, 85-03-01, 85-04-01 and 85-05-01.

When calls are received from within your overlay area, the TD-824i will redial the call using all 10 digits received from the telephone company, Area Code – Office Code – Subscriber Number as listed in the example paragraph, above.

4. Local Toll (1 + 7 digit)

Within a large part of North America area codes cover a large amount of land. In these situations, a call within your own area code will require that you dial 1 + the rightmost 7 digits of the telephone number. So if we used this for calls within the 561 area code (our area code in Jupiter), other callers that are beyond the range of a local call would dial 1 + 747-4466 to call TransTel. In this situation the caller ID would have to strip off the area code. This requires the use of some kind of table, because a basic caller ID box would not know which office codes within the 561 area code are local (7 digits only) and which are local toll (1 + 7 digits). In order to make this operate properly we must provide the caller ID box with a list of all office codes that are local or a list of all office codes that are not local. This allows the Caller ID box to determine which office codes need to be dialed with only 7 digits and which need to use 1 + 7 digits.

For Example: If I get a call from another caller within my area code, but not a local call, I will see a display on my Caller ID unit of 561-344-5678. To redial that call, we need to send the digits
1 + 344 + 5678

To make this example operate, set **Program 84-01-01 to the value 561** (home area code). Then, on **Program 86-*nxx*** you will enter the office codes that are in your area code and are reached by dialing 1+ 7 digits with a value of 1:

86-221 = 1	86-222 = 1	86-223 = 1	86-224 = 1	86-225 = 1	86-226=1
86-227 = 1	86-228 = 1	86-229 = 1	86-220 = 1		
86-321 = 1	**86-344 = 1**	86-348 = 1	86-349 = 1		
86-440 = 1	86-441 = 1	86-442 = 1	86-443 = 1	86-444 = 1	86-445 = 1

When these values are set as shown, each call received from 561-and any of the office codes will result in calls being redialed using 1+ Office Code + Subscriber Line. (1+221-1234, 1+222=1234…).

5. Local Toll (1 + 10 digit)

Some parts of the country require that in order to call a toll location within your own area code, you must dial 1 + Area Code + Office Code + subscriber number.

In this application, we have to have the telephone system "know" which office codes are local and which are not local within the area code. We have to know this in order to be able to properly return a call.

For example: If I receive a call at TransTel Communications and it has the Caller ID of 561-747-4567, and I want to return the call, I must dial only the Office Code and subscriber number. 747 is a local office code within the 561 Area Code. My telco provides me with a list of the office codes that are local and those that are toll calls within the 561 area code.

However, if I receive a call at TransTel Communications and it has the Caller ID of 561-994-2345, to redial it, I must dial 1 + 561 + 994 + 2345. It is not a local office code, but it is within the 561 area code.

Program 84-01-01 is set to 561. Office Codes within 561 that are not local calls and must be dialed using 1+Area Code + Office Code + Subscriber Line will need to have **Program 86-*nxx* programmed with the value 2**:

86-361 = 2	86-362 = 2	86-363 = 2	86-364 = 2	86-365 = 2	86-366 = 2
86-367 = 2	86-368 = 2	86-369 = 2	86-991 = 2	86-992 = 2	**86-994 = 2**

With this programming, all calls that Caller ID receives as 561-361-xxxx will be redialed using the digit string 1+561+361+xxxx. Every office code programmed with the value 2 will be dialed using this method.

6. Outside of Area Toll (1 + 10 digit)

This is the "rest of North America." This accounts for calling outside of my home area code. It will always include 1 + Area Code + Office Code + subscriber number.

For example: If I receive a call from New York City, it will display 212-987-6543 on my Caller ID unit. If I want to return the call, I must dial 1 + 212 + 987 + 6543 to call the number.

This is the default dialing for any examples not covered above. If the area code does not appear in the Home Area Code Programming form 84 and it also does not appear in the Overlay Area Code Table Form 85 the call will be placed using 1+Area code + Office Code + Subscriber Number.

These are the potential dialing patterns that are in use in the United States, Canada and many other parts of North America. Obviously, they are not all in use at one place.

Some examples within the United States:
> Miami, Florida uses patterns 3 and 6 as listed above.
> West Palm Beach, Florida uses patterns 1, 5 and 6.
> The entire state of Maine uses patterns 1, 2 and 6.
> The state of Colorado uses patterns 1, 4 and 6.

Form 83 - Caller ID Block Assignment:

This program divides Caller ID blocks for use by Stations. The number of memory buffers per block are assigned on Form 05-13-03. A Block of Caller ID memory may contain 10, 20, 30 or 40 records. The available number of blocks decreases as the number of records per block increases. Default is 10 records per block and 24 blocks per system.

You may assign up to 2 blocks to an station.
The next assigned block must be null or continuous after the first assigned block number for each extension. That means if the first assigned block number is "n" then the next assigned block must be "0 = null" or "n+1".

Form 83-ext	Blocks 01-02	Form 83-ext	Blocks 01-02	Form 83-ext	Blocks 01-02
83-_____		83-_____		83-_____	
83-_____		83-_____		83-_____	
83-_____		83-_____		83-_____	
83-_____		83-_____		83-_____	
83-_____		83-_____		83-_____	
83-_____		83-_____		83-_____	
83-_____		83-_____		83-_____	
83-_____		83-_____		83-_____	

Form **05-13-03,** the Individual Caller ID history buffers are assigned:

05-13-03	Memory Block Size	Max. Memory blocks
0	10 sets	24
1	20 sets	12
2	30 sets	8
3	40 sets	6

Example:
(Form 05-13-03=0)

83-**13**-IP CLI-T **01 02**	**13**: Station No. (2-4 digits) **01 02**: Station 13 can use block 01 and 02 for Caller ID history buffer and it can store 20 records (10 records in block 01 + 10 records in block 02).

83-**14**-IP CLI-T **03 00**	**14**: Station No. (2-4 digits) **03 00**: Station 15 can use block 03 (10 sets) for Caller ID history buffer. 00: for no additional block.

83-**15**-IP CLI-T **00 00**	**15**: Station No. (2-4 digits) **00 00**: Station 15 has no allocation for a Caller ID history buffer.

83-**16**-IP CLI-T **04 05**	**16**: Station No. (2-4 digits) **04 05**: Station 15 Can use block 04 and 05 for Caller ID history buffer and it can store 20 records (10 in block 4+10 in block 5).

Form 84-01 – Home Area Code:

This is the area code where your own telephone numbers terminate. It is the area code portion of your phone number. It is 3 digits in length.

Home Area Code	

Form 85-nn – Overlay Area Code:

  Some larger cities in the United States have exhausted an entire area code. Instead of separating portions and assigning unique area codes to different geographic regions, the telco has instead and introduced an overlay area code. This program assigns up to 5 overlay area codes for Caller ID redial feature. Each overlay Area Code is 3 digits in length.

85-01		85-02		85-03	
85-04		85-05			

Form 86-nnn – Office Code Pattern:

This form assigns proper redial pattern to each office code (only within your own area code). This is designed to provide you with the ability to differentiate between 7 digit dialing (local calls) and other calls within your own area code. There are three possible settings for calls within your own area code. You must define each type.

> 0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
> 1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
> 2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

86-200		86-220		86-240		86-260		86-280	
86-201		86-221		86-241		86-261		86-281	
86-202		86-222		86-242		86-262		86-282	
86-203		86-223		86-243		86-263		86-283	
86-204		86-224		86-244		86-264		86-284	
86-205		86-225		86-245		86-265		86-285	
86-206		86-226		86-246		86-266		86-286	
86-207		86-227		86-247		86-267		86-287	
86-208		86-228		86-248		86-268		86-288	
86-209		86-229		86-249		86-269		86-289	
86-210		86-230		86-250		86-270		86-290	
86-211		86-231		86-251		86-271		86-291	
86-212		86-232		86-252		86-272		86-292	
86-213		86-233		86-253		86-273		86-293	
86-214		86-234		86-254		86-274		86-294	
86-215		86-235		86-255		86-275		86-295	
86-216		86-236		86-256		86-276		86-296	
86-217		86-237		86-257		86-277		86-297	
86-218		86-238		86-258		86-278		86-298	
86-219		86-239		86-259		86-279		86-299	

Form 86-nnn – Office Code Pattern 300—399:

This form assigns proper redial pattern to each office code (only within your own area code). This is designed to provide you with the ability to differentiate between 7 digit dialing (local calls) and other calls within your own area code. There are three possible settings for calls within your own area code. You must define each type.

        0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
        1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
        2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

86-300		86-320		86-340		86-360		86-380	
86-301		86-321		86-341		86-361		86-381	
86-302		86-322		86-342		86-362		86-382	
86-303		86-323		86-343		86-363		86-383	
86-304		86-324		86-344		86-364		86-384	
86-305		86-325		86-345		86-365		86-385	
86-306		86-326		86-346		86-366		86-386	
86-307		86-327		86-347		86-367		86-387	
86-308		86-328		86-348		86-368		86-388	
86-309		86-329		86-349		86-369		86-389	
86-310		86-330		86-350		86-370		86-390	
86-311		86-331		86-351		86-371		86-391	
86-312		86-332		86-352		86-372		86-392	
86-313		86-333		86-353		86-373		86-393	
86-314		86-334		86-354		86-374		86-394	
86-315		86-335		86-355		86-375		86-395	
86-316		86-336		86-356		86-376		86-396	
86-317		86-337		86-357		86-377		86-397	
86-318		86-338		86-358		86-378		86-398	
86-319		86-339		86-359		86-379		86-399	

Form 86-nnn – Office Code Pattern 400—499:

This form assigns proper redial pattern to each office code (only within your own area code). This is designed to provide you with the ability to differentiate between 7 digit dialing (local calls) and other calls within your own area code. There are three possible settings for calls within your own area code. You must define each type.

     0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
     1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
     2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

86-400		86-420		86-440		86-460		86-480	
86-401		86-421		86-441		86-461		86-481	
86-402		86-422		86-442		86-462		86-482	
86-403		86-423		86-443		86-463		86-483	
86-404		86-424		86-444		86-464		86-484	
86-405		86-425		86-445		86-465		86-485	
86-406		86-426		86-446		86-466		86-486	
86-407		86-427		86-447		86-467		86-487	
86-408		86-428		86-448		86-468		86-488	
86-409		86-429		86-449		86-469		86-489	
86-410		86-430		86-450		86-470		86-490	
86-411		86-431		86-451		86-471		86-491	
86-412		86-432		86-452		86-472		86-492	
86-413		86-433		86-453		86-473		86-493	
86-414		86-434		86-454		86-474		86-494	
86-415		86-435		86-455		86-475		86-495	
86-416		86-436		86-456		86-476		86-496	
86-417		86-437		86-457		86-477		86-497	
86-418		86-438		86-458		86-478		86-498	
86-419		86-439		86-459		86-479		86-499	

Form 86-nnn – Office Code Pattern 500—599:

This form assigns proper redial pattern to each office code (only within your own area code). This is designed to provide you with the ability to differentiate between 7 digit dialing (local calls) and other calls within your own area code. There are three possible settings for calls within your own area code. You must define each type.

    0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
    1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
    2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

86-500		86-520		86-540		86-560		86-580	
86-501		86-521		86-541		86-561		86-581	
86-502		86-522		86-542		86-562		86-582	
86-503		86-523		86-543		86-563		86-583	
86-504		86-524		86-544		86-564		86-584	
86-505		86-525		86-545		86-565		86-585	
86-506		86-526		86-546		86-566		86-586	
86-507		86-527		86-547		86-567		86-587	
86-508		86-528		86-548		86-568		86-588	
86-509		86-529		86-549		86-569		86-589	
86-510		86-530		86-550		86-570		86-590	
86-511		86-531		86-551		86-571		86-591	
86-512		86-532		86-552		86-572		86-592	
86-513		86-533		86-553		86-573		86-593	
86-514		86-534		86-554		86-574		86-594	
86-515		86-535		86-555		86-575		86-595	
86-516		86-536		86-556		86-576		86-596	
86-517		86-537		86-557		86-577		86-597	
86-518		86-538		86-558		86-578		86-598	
86-519		86-539		86-559		86-579		86-599	

Form 86-nnn – Office Code Pattern 600—699:

This form assigns proper redial pattern to each office code (only within your own area code). This is designed to provide you with the ability to differentiate between 7 digit dialing (local calls) and other calls within your own area code. There are three possible settings for calls within your own area code. You must define each type.

          0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
          1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
          2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

86-600		86-620		86-640		86-660		86-680	
86-601		86-621		86-641		86-661		86-681	
86-602		86-622		86-642		86-662		86-682	
86-603		86-623		86-643		86-663		86-683	
86-604		86-624		86-644		86-664		86-684	
86-605		86-625		86-645		86-665		86-685	
86-606		86-626		86-646		86-666		86-686	
86-607		86-627		86-647		86-667		86-687	
86-608		86-628		86-648		86-668		86-688	
86-609		86-629		86-649		86-669		86-689	
86-610		86-630		86-650		86-670		86-690	
86-611		86-631		86-651		86-671		86-691	
86-612		86-632		86-652		86-672		86-692	
86-613		86-633		86-653		86-673		86-693	
86-614		86-634		86-654		86-674		86-694	
86-615		86-635		86-655		86-675		86-695	
86-616		86-636		86-656		86-676		86-696	
86-617		86-637		86-657		86-677		86-697	
86-618		86-638		86-658		86-678		86-698	
86-619		86-639		86-659		86-679		86-699	

Form 86-nnn – Office Code Pattern 700—799:

This form assigns proper redial pattern to each office code (only within your own area code). This is designed to provide you with the ability to differentiate between 7 digit dialing (local calls) and other calls within your own area code. There are three possible settings for calls within your own area code. You must define each type.

    0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
    1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
    2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

86-700		86-720		86-740		86-760		86-780	
86-701		86-721		86-741		86-761		86-781	
86-702		86-722		86-742		86-762		86-782	
86-703		86-723		86-743		86-763		86-783	
86-704		86-724		86-744		86-764		86-784	
86-705		86-725		86-745		86-765		86-785	
86-706		86-726		86-746		86-766		86-786	
86-707		86-727		86-747		86-767		86-787	
86-708		86-728		86-748		86-768		86-788	
86-709		86-729		86-749		86-769		86-789	
86-710		86-730		86-750		86-770		86-790	
86-711		86-731		86-751		86-771		86-791	
86-712		86-732		86-752		86-772		86-792	
86-713		86-733		86-753		86-773		86-793	
86-714		86-734		86-754		86-774		86-794	
86-715		86-735		86-755		86-775		86-795	
86-716		86-736		86-756		86-776		86-796	
86-717		86-737		86-757		86-777		86-797	
86-718		86-738		86-758		86-778		86-798	
86-719		86-739		86-759		86-779		86-799	

Form 86-nnn – Office Code Pattern 800—899:

This form assigns proper redial pattern to each office code (only within your own area code). This is designed to provide you with the ability to differentiate between 7 digit dialing (local calls) and other calls within your own area code. There are three possible settings for calls within your own area code. You must define each type.

　　　　0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
　　　　1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
　　　　2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

86-800		86-820		86-840		86-860		86-880	
86-801		86-821		86-841		86-861		86-881	
86-802		86-822		86-842		86-862		86-882	
86-803		86-823		86-843		86-863		86-883	
86-804		86-824		86-844		86-864		86-884	
86-805		86-825		86-845		86-865		86-885	
86-806		86-826		86-846		86-866		86-886	
86-807		86-827		86-847		86-867		86-887	
86-808		86-828		86-848		86-868		86-888	
86-809		86-829		86-849		86-869		86-889	
86-810		86-830		86-850		86-870		86-890	
86-811		86-831		86-851		86-871		86-891	
86-812		86-832		86-852		86-872		86-892	
86-813		86-833		86-853		86-873		86-893	
86-814		86-834		86-854		86-874		86-894	
86-815		86-835		86-855		86-875		86-895	
86-816		86-836		86-856		86-876		86-896	
86-817		86-837		86-857		86-877		86-897	
86-818		86-838		86-858		86-878		86-898	
86-819		86-839		86-859		86-879		86-899	

Form 86-nnn – Office Code Pattern 900—999:

This form assigns proper redial pattern to each office code (only within your own area code). This is designed to provide you with the ability to differentiate between 7 digit dialing (local calls) and other calls within your own area code. There are three possible settings for calls within your own area code. You must define each type.

       0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
       1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
       2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

86-900		86-920		86-940		86-960		86-980	
86-901		86-921		86-941		86-961		86-981	
86-902		86-922		86-942		86-962		86-982	
86-903		86-923		86-943		86-963		86-983	
86-904		86-924		86-944		86-964		86-984	
86-905		86-925		86-945		86-965		86-985	
86-906		86-926		86-946		86-966		86-986	
86-907		86-927		86-947		86-967		86-987	
86-908		86-928		86-948		86-968		86-988	
86-909		86-929		86-949		86-969		86-989	
86-910		86-930		86-950		86-970		86-990	
86-911		86-931		86-951		86-971		86-991	
86-912		86-932		86-952		86-972		86-992	
86-913		86-933		86-953		86-973		86-993	
86-914		86-934		86-954		86-974		86-994	
86-915		86-935		86-955		86-975		86-995	
86-916		86-936		86-956		86-976		86-996	
86-917		86-937		86-957		86-977		86-997	
86-918		86-938		86-958		86-978		86-998	
86-919		86-939		86-959		86-979		86-999	

Programming Cross Reference

By Application:

Incoming Calls:

RINGING ASSIGNMENT

01-tk-stn	Day Ringing And Ringing Line Preference Assignment
02-tk-stn	Night Ringing And Ringing Line Preference Assignment
05-01-05	Busy Reminder Tone Interval (Off-Hook Ringing/Camp-On)
05-02-07	Ring On Timer (Minimum ring to be detected)
05-02-08	Ring Off Timer (Time to hold signal during silent period)
05-08-01	CO Hunt Interval
20-nn	Day/Night Service Schedule
35-tk-07	Day Ring Type
35-tk-08	Night Ring Type
29-tk-04	Ringer tone for calls from this trunk
29-tk-05	Number of stations in form 01 & 02 to ring on incoming call
35-tk-06	Loud bell relay assignment
44-st-04	Allow Trunk Answer
35-TK	Trunk Name

Outgoing Calls:

DIAL '9'

05-04-02	Dial '9' Enable/Disable
36-grp-tk	Dial '9' Group Assignment
41-stn-04	Stations Dial '9' Group Assignment

DIAL '87'

38-gp	Dial '87' Group Assignment
46-stn-01	Stations Dial '87' Group Assignment

PABX OUTGOING CODE

05-03-04	Code for outside line in PABX (If trunk/trunks are served by PABX

TRUNK SPECIFICATIONS

05-01-06	Pause Time Duration (For Speed Dial Pauses)
05-01-07	DTMF Generation Time
05-02-05	Flash Time to CO (For Special CO Features or Centrex)
05-02-07	Ring On Time (Minimum ring signal detected)
05-02-08	Ring Off Time (Time to hold signal during silent period)
05-03-01	Make/Break Ratio
29-trk-02	UCD function setting
29-trk-04	Set ringing tone
29-trk-05	Number of stations in form 01 & 02 to ring on incoming call
35-trk-01	Trunk Type (PABX/CO)
35-trk-02	Trunk Signaling Type (dial pulse/DTMF)
35-trk	Trunk Name

SPEED DIAL

05-01-06	Pause Duration for Speed Dial pauses
05-03-02	Automatic Trunk Search During Speed Dial, Auto Redial, Saved Redial, etc.
05-04-06	Speed Dial Distribution
05-05-03/04	System Speed Dial Unrestricted block
09-spd-xx	System Speed Dial Locations
42-stn-01/02	Register Memory Block for Personal Speed Dial

AUTO-REDIAL

05-02-03	Auto-Redial Off Hook (wait for answer) Timer
05-03-02	Automatic Trunk Search
05-05-07	Auto-Redial Attempts (Quantity)
05-05-08	Auto-Redial Time (Inter-Call) between attempts

MISC.

05-05-06	Dial tone detection

Intercom Calls:

INTERCOM CALL SIGNALING

05-03-03	Intercom call signaling to electronic telephone sets

STEP CALL

05-07-01	Intercom Step Call Type
41-stn-01	Station Group Assignment

DIAL TONE PATTERN

05-03-07	SLT Dial Tone Pattern Options
05-04-07	Intercom Single Digit Dialing
10-grp-xx	Single Digit Dialing Assignment
41-stn-01	Station Group Assignment

DIRECT STATION SELECT

07-grp-key	Flexible Key Group Assignment
41-stn-02	Keyphone Flexible Key Group Assignment

DIAL 0 (CALL OPERATOR)

05-06-05	Operator/CO access codes
44-stn-04	Manual Line

INTERCOM DIALING RESTRICTION

45-stn-01	Intercom Dialing Restriction

Busy/During Conversation:

HOLD AND HOLD RECALL

05-01-01	Hold Recall Timer (Time until station is warned of hold call)
05-01-02	Exclusive Hold Recall Timer (Same operation as hold recall)
05-01-03	Hold Recall Time out (Time before call is rerouted to Operator - After Hold Recall Timer has expired.)
05-07-04	DISA Recall Capability
05-12-03	Station ability to place call on Exclusive Hold
44-stn-02	Station ability to hold a call

BUSY REMIND / CAMP-ON

05-01-05	Busy Reminder Interval (Time between notifications)

CALL SPLIT

44-stn-03	Call Split

TRANSFER

05-06-01	Transfer Recall Timer Blind transfer (Camp-On / Busy)
05-06-02	Transfer Recall Timer blind transfer (No Answer)
05-08-06	DISA No Answer Recall (To Message) Timer
05-08-07	DISA Transfer Time (No Digits Dialed)

MESSAGE WAITING LEVEL

46-stn-02	Message Waiting Level

OVERRIDE

40-stn-01	Override Level

DISA:

05-01-04	Delayed DISA Access Time
05-07-04	DISA Recall Capability
05-08-04	DISA Operator Recall Location (No Answer)
05-08-06	DISA No Answer Recall Timer
05-08-07	DISA Transfer Timer - No digits dialed
05-11-06	DISA Transfer Count - Console busy
05-11-02	DISA Password - Optional extra passwords
05-11-05	DISA Special Digit Acceptance
35-tk-04	DISA / External Call Forward Status

DISA SINGLE DIGIT DIALING

05-04-07	Intercom Single Digit Dialing Enable
05-11-08	DISA Single Digit Dialing
10-grp-stn	Single Digit Dialing Assignment
20-nn	Day/Night Service Schedule

AUTOMATED ATTENDANT - VOICE SERVICE UNIT

19-ch-fn	Voice Service Unit Channel Assignments
46-stn-04	DISA Recall Capability (No Answer/Busy)

Night Service:

02	Night Ringing And Ringing Line Preference Assignment
09-spd-nn	System Speed Dial 101~109 for ECF
20-nn	Day/Night Service Schedule
35-tk-03	External Call Forward Location (Speed Dial Assignment)
35-tk-04	DISA/ECF, Day/Night Status

Group Assignments:

CONSOLE ASSIGNMENT

04-grp-stn	Assign Stations to be consoles by group

FLEXIBLE KEY GROUP ASSIGNMENTS

07-grp-key	Key Group Layout Assignment
41-stn-02	Assign stations to Key Groups

DIAL '9' TRUNK GROUPS

36-grp-trk	Assign trunks to groups for Dial '9'
41-stn-04	Assign stations a Dial '9' group

DIAL '87' TRUNK GROUPS

38-grp-trk	Assign trunks to groups for Dial '87'
46-stn-01	Assign stations a Dial '87' group

GROUP ASSIGNMENT FOR STATIONS (PAGE ZONE, PICK UP, SINGLE DIGIT)

41-stn-01	Assign stations to station groups

Call Control:

TOLL RESTRICTION

05-05-03	Set a portion of system speed dial for no restriction (Hundreds)
05-05-04	Set a portion of system speed dial for no restriction (Tens)
05-03-05	Toll Access Code (Usually a '1') for SMDR only
18-pln-trk	Assigning Toll Class by Toll Plan/Trunk used
41-stn-05	Station Day Toll Plan Assignment
41-stn-06	Station Night Toll Plan Assignment
51~59	Allowed (Exception) Tables for Toll classes 1~9
61~66	Restrict (Deny) Tables for Toll classes 1~6

FORCED ACCOUNT CODES

17-nn	Creating Account Codes
40-stn-08	Assigning Account Codes to Stations

CALL LIMIT

05-04-03	Call Limit Type
40-stn-03	Call Limit Duration (Class of Service - per station)

PASSWORDS

13-01	System Programming Password (default=none)
13-02	DISA Password (for using a trunk on DISA call)
13-03	Toll Override Password

| 13-04 | Password for Monitoring over DISA (defaulr=none) |

STATION LOCK/UNLOCK

| 40-stn-07 | Station Lock/Unlock Status |

BUSY OUT A TRUNK

| 37-tk-x | Taking a trunk out of service |

INTERCOM DIALING RESTRICTIONS

| 45-stn-01 | Restrict station to station intercom dialing |

System Clock:

DATE AND TIME SETUP

05-04-04	12/24 hour time format
11-	Set the system time
20-nn	Day/Night schedule Definition

SYSTEM ALARM

| 12-nn | System Alarm Clock |
| 44-stn-01 | Stations to include (notify) in system alarms |

WAKE UP CALLS

| 05-05-01 | Wake up signaling type |
| 19-ch-fn | VSC channel Assignment |

Station Numbering:

| 05-03-06 | Digit length selection (2, 3, or 4 digits) |
| 43-port-01 | Station number (extension) Assignment |

Single Line Telephone:

05-02-01	Dial Tone Timeout
05-02-02	Interdigit Timeout
05-02-04	Hook switch Disconnect Timer
05-02-06	Minimum Flash Timer (used to recognize a hook switch flash for hold)
05-04-08	Message Waiting Status Setup
05-06-07	Single Line Telephone Hold Procedure
05-07-02	Toll fraud Protection (Calling Proof)
05-08-03	SLT Busy Remind Tone Timer
05-08-05	SLT Feature Programming Access Code
45-stn-02	Setting Single line type (VM port, Dual Port)

Miscellaneous:

CALL FORWARD NO ANSWER TRANSFER TIME

| 05-01-08 | Call Forward-No Answer Timer |

HOT LINE

| 09-spd-nn | System Speed dial number for Hot Line use |
| 47-stn-xx | Hot Line destination for a station |

MONITOR

| 40-stn-02 | Station Monitor Level |

PAGING

07-grp-key	Paging key
40-stn-05	Station Paging Access Deny/Allow
40-stn-06	Receive Page Over Speaker Deny/Allow
41-stn-01	Station Page Group

Optional Services:

DOOR PHONE & DOOR SWITCH

03-01-ext	Stations to ring upon Door Phone Activation
05-12-04	Door Relay Activation Timer
06-01-fn	Relay Assignment (for doorphone latch release)

ACCESS CONTROL PHONE

13-05	Pass word for entry from ACP
46-ST-08	Station type (ACP/ACP as wall phone, DK1
87-port	Specify key card for the doorphone
88	Register key card
89-ser	Delete key card
90	Encode key card

Voice Mail Integration:

01	Day Ringing Assignment
02	Night Ringing Assignment
05-02-04	Single Line Telephone Release (Disconnect) Timer
05-02-06	Single Line Telephone Minimum Flash Timer
05-06-07	Single Line Telephone Hold Procedure
05-10	Voice Mail Leading Digits
05-12-05	Voice Mail Integration Type
43-port-02	Equipment type for Voice Mail

Caller ID:

83-stn	Set blocks for station CID
05-13-03	Set block size. 10, 20, 30, 40 records
46-stn-03	Caller ID to Single Line Stations
84-	Home Area Code (for auto redial)
85-	Overlay Area Code (for auto redial)
68-	Office Code Redial Pattern

SMDR:

14-01-01	Set recording start time
14-01-02	Record incoming calls?
14-01-03	Record local calls?
14-01-04	Record unanswered incoming calls?
14-01-05	Print Page header?
14-01-06	Set number of records between headers
14-01-07	Reserved
14-01-08	Detect Polarity Reversal

Voice Mail:

05-12-05	Set Voice Mail integration type
43-prt-02	Set equipment type for Voice Mail Port
35-trk-07	Set ring type (day)
35-trk-08	Set ring type (night)
67-grp	Set Hunt group Pilot number and hunt type for VM
68-grp	Set Hunt group members for VM (day)
69-grp	Set Hunt group members for VM (night)

Hunt Groups:

67-grp	Set Hunt group Pilot number and hunt type
68-grp	Set hunt group members for (Day)
69-grp	Set hunt group members for (Night)

Trunk Assignment:

05-04-02	Dial '9' enable/disable
36-grp-trk	Dial '9' Group assignment
38-grp-trk	Dial '87' Group assignment
41-stn-04	Assign Dial '9' Group to Stations
46-stn-01	Assign Dial '87' Group to Stations

Toll Control:

05-03-05	Toll Access Code
05-05-03	Set System Speed dial unrestricted (hundreds)
05-05-04	Set System Speed dial unrestricted (tens)
05-07-02	Toll Override Prevention from Quick Dialing (analog phones)
05-07-05	Toll Override Prevention using DTMF gen. (key phones)
18-toll plan	Toll Class by trunk used
41-stn-05	Station Toll Plan (day time)
41-stn-06	Station Toll Plan (night time)
45-stn-07	Allow unrestricted Toll by System Speed Dial
51/59	Toll Class Exception tables for class 1~9
61/66	Toll Class Restriction tables for class 1~6

Least Cost Routing:

05-13-07	Special Rate day for LCR
05-13-08	2nd Special Rate day for LCR
75-1/500	LCR Dialed digit analysis table
76-1/60	LCR Routing table
77-1/99	LCR Modifying Table
78-stn-01	Station Routing Level
78-stn-02	Station Direct Access to Trunk (LCR Override)

By Program Type in Alphabetical Order:

System Parameters:

12/24 Hours Clock	05-04-04
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ACD - 1 Release Time	05-09-08
ACD - 1 Segment 2 Recall Time	05-09-07
Action For Call Duration Limiting	05-04-03
Auto Redial Pause Time	05-05-08
Auto Redial Ringing Time – PSTN Lines	05-02-03
Auto Redial Times	05-05-07
Automatic Trunk Search	05-03-02
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Call Cut Off Timer – No Polarity Reversal Received	05-13-03
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ACP Encode key card	90
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DISA Recall Capability	46-ST-04
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TransTel Key Telephone Operation Manual.

Introduction

This section is devoted to an explanation of the implementation and operation of TransTel electronic telephones (keysets). Included are normal functions that are available to most station users and functions that are available only to console operators.

1A2 Emulation / Privacy Release

This feature allows station users to join a conversation in progress with outside lines and other station users. A station user must have a class of service option enabled in order to join a call in progress. You may temporarily invoke privacy to reject others attempts to join your conversation, if desired, through the use of a 1A2 (privacy release) key. This feature may be activated on all lines, or only specific lines as required.

To join in on a conversation:

1. Dial desired party and hear busy tone
2. Press desired **[CO]** line key. Your telephone set will be connected to the call in progress on that line.

To invoke privacy:

1. If you are on a conversation and you would like the conversation to remain private, press the 1A2 key. The 1A2 key will light indicating the call's status as private.

Note: In system programming individual lines may or may not be permitted 1A2 Emulation. Also, individual stations may be allowed the ability to invoke the feature by pressing the line and entering into the conversation. Certain station users may elect to invoke call privacy by pressing the 1A2 key.

Account Codes – Client

During a conversation you may enter an account code for billing purposes. The system will output a call record to an external device for tracking purposes of billable time spent with a specific client.

During a conversation
1. Press [SAVE] followed by [MSG]
2. Enter Account Code (up to 8 digits)
3. Press [SPK] to end.

Advisory Messages

If your telephone is equipped with an LCD, you can put a message on your telephone when you are unavailable. Any other station that is equipped with an LCD will see this message on their LCD when they call your station.

Press PGM.
Press MSG.
Enter the message number you wish to display.

To cancel an advisory message:

Press PGM.
Press MSG.
Press SPKR.

Alternate Trunk Group Access (Dial 87)

In some applications, you may have more than one type of outside line. If you do, you will probably use this method to access your secondary lines.

Lift the handset or Press SPKR.
Dial 87.
You will be connected to an available line in your alternate trunk group.

Answering Calls

There are several ways that you may answer calls at Your telephone. Depending on the particular type of call and the system programming, calls may require different actions in order to answer them.

Intercom Calls

Voice Announce Call:
If the system is programmed for Voice Announce calls, you will hear a quick tone. The calling party will then be routed to your speaker. To answer the call and have the ability to talk back to the caller, press **[MIC]** (if your telephone is equipped with a speakerphone) or lift the handset .

Note: If your telephone is programmed for Auto Answer, your microphone will activate automatically upon a voice announce call. It is not necessary to press any buttons to answer a call if your station is in the Auto Answer mode.

Tone Signal Call:
If the system is programmed for Tone Signaling on Intercom calling, or if you are called by a Voice Mail Port, you will hear a double ring that repeats until you answer the call. You may answer the call by pressing **[SPK]** if your telephone is speakerphone equipped or answer by lifting the handset.

External Calls Ringing Your Telephone Set
For outside line calls that ring at your telephone, lift the handset or press **[SPK]**. You will be connected to the call.

External Calls Not Ringing At Your Set

Calls With CO Line Appearance:
Incoming calls on a line that appears on your set may be picked up by pressing the flashing CO line key. You will be connected to the call.

Note: This feature depends on system programming. On some systems this option may be disabled. If that is the case, this procedure will not work.

Calls That Do Not Appear on Your Telephone Set:
If an incoming call is not ringing on your telephone set and it does not appear on a line button on your telephone set, you may answer the call by one of several methods, depending on the way the call is presented.

Please see Call Pickup for further explanation if necessary.

Line is ringing at a station within your pickup group:
Press the Group Pick Up key on your telephone set or
1. Press **[*]**.
2. The LCD on your telephone (if equipped) will display: **Pick Up _**
3. Press **[0]**. You will be connected to the call.

Line is ringing at a station in a pickup group other than your own:
Press the Group Pick Up key on your telephone set or
1. Press **[*]**.
2. The LCD on your telephone (if equipped) will display: **Pick Up _**
3. Press **[8]**.   Display shows: **Enter GROUP #**
4. Dial the group where the call is ringing (1-8). You will be connected to the call.
        OR
        Press **[*]** followed by **[9]** to pick up any ringing telephone assigned to any ringing group.

Answering a Doorphone

You can only answer a doorphone if your station is programmed to ring when the doorphone button is pressed.

When your telephone rings, lift the handset or press SPKR.
You will be connected to the doorphone.
If your system is equipped with a door strike relay:

Press 0 while talking to the doorphone. The strike release will activate, allowing security door (or other controlled area) to be accessed.

Answer Paging (Meet Me Page)

Use this when you want to talk to the person who is making the page.

Lift the handset or press SPKR.
Dial # and *.
You will be connected to the person who is making the page.
If the person who made the page has hung up, you will hear busy tone.

Automatic Callback

When dialing another station that is busy, you may activate an automatic callback. When the busy station becomes free, your telephone set will ring. When you answer the callback, the other station's telephone will ring and you will be connected.

To initiate a Callback:

1. Dial desired party and hear busy tone
2. Press **[MSG].** Your telephone set will return to an idle condition.

To respond to a Callback:

1. If you are on a conversation and a callback has been left on your telephone and you have an LCD display it will indicate in the lower portion of the LCD: **MSG ST:XX** Also, your Message key will flash. This tells you who is leaving the callback message.

2. You may place your existing call on hold and hang up or simply   hang up. The originator of the callback will be called and upon answer, your telephone will ring. Answer and you will be connected.

Automatic Last Number Redial

Rather than pressing REDIAL over and over again, you can let the telephone system do it for you. This feature will repeatedly re-dial a telephone number for you. But you must be near your telephone, because this feature doesn't listen to see if the other end answers. It only stays off hook for a certain period of time (determined by system programming) and then it hangs up…..unless you lift your handset or turn on your microphone.

After you have dialed an outside call,
Hang up.
Press SPD.
Press REDIAL. Your telephone will redial the last number called and remain off hook for at least 10 seconds (depending on system programming). And will continue to redial the number periodically for a number of times (the number of times also depends on system programming).
When the number you dialed answers, lift the handset or press your MIC key to carry on a conversation and keep the system from hanging up.

Automatic Line Access

Automatic Line Access allows a station to gain access to a telephone line without pressing a specific CO line button. It is also known as Dial 9 access.

1. Dial **[9]**.
2. Outside CO line dial tone will be returned from the first available CO line in your Dial 9 group. If no outside lines in your group are available, you will hear a Busy signal.

Note: In some systems, you must dial **[0]** instead of **[9]** depending on the country where you are located. Please check with your system administrator for the applicable access code.

Automatic Redial

Automatic Redial allows you to save a telephone number for use at a later time. This feature is in addition to Last Number Redial.

1. You have dialed an outside call. The number does not answer or is busy.
2. Press **[SAVE]**.
3. The lower portion of the LCD (on display telephones) will display: **Auto Save**
4. You may hang up.
5. You may make other calls if you wish.
6. While your telephone is idle, press **[SAVE]**.
7. The telephone will access an available line, turn on your speaker and redial the saved number.
8. If you take no action, the system will monitor the call for a programmable period of time and then disconnect the call and return your telephone to idle.
9. The telephone set will periodically access a CO line and continue to redial the saved number. Steps 7 and 8 will continue for a programmed number of times or until you lift the handset while an attempt is in progress.

Note: If you place another call while Auto Redial is active, your telephone will wait until you have finished the call and resume the Auto Redial mode.

Automatic Saved Number Redial

This feature is similar to Automatic Last Number Redial, but it adds the ability for you to save a number, dial some other calls and then come back to it later.

After you have dialed an outside call,

Press SAVE. Your Display (if you have one) will show "Auto Save."
Hang up.

You may make 1 or a hundred calls (or more if you need to…) in between.

Press SAVE. Your telephone will redial the number you previously saved and remain off hook for at least 10 seconds (depending on system programming). And will continue to redial the number periodically for a number of times (the number of times also depends on system programming).
When the number you dialed answers, lift the handset or press your MIC key to carry on a conversation and keep the system from hanging up.

Background Music

If your system is equipped with background music or music on hold capabilities, you may choose to have the music play over your telephone's speaker when your set is idle. Background music will automatically be interrupted whenever you initiate a telephone call or receive a call.

1. While your set is idle, press **[#]**. The **[SPK]** button will light. Background music will be heard through your telephone speaker.
2. You may discontinue background music by pressing **[#]** or by pressing the lit **[SPK]** key.

Barge-In (Override)

If you need to join a conversation for any reason, this feature will let you drop in on an existing conversation. Please be aware that this option is a level controlled option (from system programming), so you may be able to override no phones, a few phones or all phones, depending on your telephone's access level. Some stations may not have access to this feature.

Dial a station. It is busy (or in Do Not Disturb)
Press 0. If you have access, you will hear a warning tone (so will everyone else in the call) and you will be allowed into the conversation.

You may also use this feature on a CO line if you do not have an appearance of the station you want to override.

Lift the handset or press SPKR.
Press the busy CO line.
Press 0. If you have access, you will hear a warning tone (so will everyone else in the call) and you will be allowed into the conversation.

Caller ID Features

The Caller ID feature on the TD-824i system allows you to identify incoming callers before you answer the call. This feature is available only to digital telephone sets equipped with an LCD display.

While your telephone set is ringing with an incoming call:
1.   Your LCD will display: **TK: XX**
                                                 TransTel
Note: Caller ID information will appear on your LCD with incoming calls, held calls, transferred calls, and recalls back to your station. You will also ger Caller ID information if you are talking on an outside line and another calls rings in to your telephone set.

To review Caller ID records:
1. Press the lit Caller ID key on your telephone set.
Press **[VOL   ]** or **[VOL   ]** to scroll back and forth through the records.

To view Date and Time:
1. While reviewing a record you may also view the date and time by pressing the **[MIC]** key.

Redial Caller ID Number:
1. Press the **[REDIAL]** key. The system will place the call for you automatically. The current Caller ID record will be dialed back.

<u>Delete Caller ID Record:</u>

1. While reviewing a Caller ID record, you may delete it by pressing the **[TSF]** key.

<u>To exit Caller ID Review Mode:</u>

1. Press the **[SPK]** key.

Call Forwarding

To forward All calls:

Press PGM.
Enter CFD
Dial the extension number where you want to forward your calls.
Press 1 for All Calls.

Your telephone will return to idle. Your telephone is now forwarded. All calls to your station number will now ring at the forwarding location.

To forward busy calls:

Press PGM.
Enter CFD
Dial the extension number where you want to forward your calls.
Enter 2 for Busy Conditions.
Dial the extension number where you want to forward your calls.

Your telephone will return to idle. Your telephone is now forwarded. All calls to your station number will now ring at the forwarding location, when your telephone is busy.

To forward calls when you don't answer or are busy:

Press PGM.
Enter CFD
Dial the extension number where you want to forward your calls.
Enter 3 for No Answer / Busy Conditions.
Dial the extension number where you want to forward your calls.

Your telephone will return to idle. Your telephone is now forwarded. All calls to your station number will now ring at the forwarding location, if you do not answer your telephone or your telephone is busy.

Note: Prior to software version G1-a10e, stations were unable to forward to hunt groups in systems using 3 or 4 digit numbering plans.

Note: Prior to software version G1-a10e, stations were unable to forward to ACP phones.

Call Forward All stations (Operator Function) [G1-a10e]

In some instances, an operator may need to program all stations into Call forwarding. This can be achieved as follows:
1. From the operator station, press [PRG]
2. Press Call Fwd (FN:53).
3. Enter 00 (2 digit numbering plan) or 000 (3 digit numbering plan) or 0000 (4 digit numbering plan).
4. Enter forwarding type (1=All, 2 = Busy, 3 = Busy/No Answer)
5. Enter forwarding location extension number or hunt group pilot number.

Clear All Call Forwarding (Operator Function) [G1-a10e]

To clear all call forwarding on the system:
1. From the operator station, press [PRG]
2. Press Call Fwd (FN:53).
3. Enter 00 (2 digit numbering plan) or 000 (3 digit numbering plan) or 0000 (4 digit numbering plan).
4. Press 4.

Note: This will not remove information programmed in Forms 46-st-07 and 78-st-04.

Call Hold

You can place outside callers and internal (intercom) calls on hold.

Press HOLD.
The caller is on hold.

To pick up an outside line call on Hold.

Lift the handset or press SPKR.
Press the Flashing CO line key
OR
Dial 80 plus the line number (1-4).

Calling the Doorphone

If your system is equipped with a doorphone, this is how you will call it.

Lift the handset or press SPKR.
Dial 88 to speak to the Doorphone.
(If the doorphone is programmed with a Relay, you may activate it
by dialing 0 while connected to the doorphone).

Call Pickup

You can use call pickup to answer calls that are ringing at other telephones. There are a variety of types that you may choose.

DIRECT (EXTENSION) CALL PICKUP

This allows you to answer a specific station that is ringing.

Lift the handset or press SPKR.
Press the * key on the dial pad.
Dial the extension number of the station that is ringing.
You will be connected to the caller.

ALL GROUP PICKUP

You can pick up any ringing call in the system using this method. You will pick up the oldest ringing call.

Lift the handset or press SPKR.
Press the * key on the dial pad.
Press 9 on the dial pad.
You will be connected to the caller.

PICKUP WITHIN YOUR GROUP

This allows you to pick up telephones that are in your own station group.

Lift the handset or press SPKR.
Press the * key on the dial pad.
Press 0 on the dial pad.
You will be connected to the caller.

PICKUP A CALLER IN ANOTHER GROUP

This allows you to pick up telephones in another station group. You must know the group number that you want to answer to use this. In the TD-824i, it is unlikely that you will use it, but it is available.

Lift the handset or press SPKR.
Press the * key on the dial pad.
Press 8 on the dial pad.
Press 1 - 8 for the group that you want to pick up.
You will be connected to the caller.

Call Swap

If you want to alternate between two callers, this feature allows you to do so quite easily.

You are speaking with the first caller.
Press HOLD.
The caller is on hold.
Make a second call.
Press SPD and then #. You will be connected to the first party. The second party will be on hold.

Press SPD and then #. You will be connected to the second party. The first party will be on hold.

If you have a Split/Swap Key programmed on your telephone set, you may use it instead of SPD #.

Call Transfer

Call transfer allows you to send a call to a specific station. Most of the time when you are using TransTel Electronic sets, placing a station on hold and announcing the call to the station is all that is necessary, but instances where you need to transfer a call to a FAX machine or a computer modem, you need to use the capability.

Unscreened Transfer:
Place the caller on hold by pressing the HOLD button.
Dial the station number where the call needs to go.
Press TRF/FL or hang up (depending on programming).
The call has been successfully transferred.

Screened Transfer:
Place the caller on hold by pressing the HOLD button.

Dial the station number where the call needs to go.
Wait for the station to answer.
Press TRF/FL or hang up (depending on programming).
The call has been successfully transferred.

If you have a DSS button for the station where you transfer the call, you do not need to press the HOLD button first. Just press the DSS button for the station where you want to transfer the call. Then you use either the Unscreened or Screened method of transfer.

Call Waiting (Camp On)

If the station you call is busy, you can "mark" the station so that when the station becomes free, the called station will ring back to your telephone.

When you hear busy tone, Press MSG key.
Hang up.
When the other station is free, your station will ring with a special ringing tone. When you answer, the other station will begin ringing.

Check In – Check Out (Operator Function)

Check In - Check Out allow an operator station to change the dialing restriction of a telephone. This is commonly used in Hotel applications where there is a need to "turn off" dialing capabilities of individual room telephones. This function is only available to system operators.

Note: The use of Check In - Check Out requires that function keys are programmed on the telephone set.

Check In:
1.   Press **[Hotel]** and the digit 1.
2.   Dial the extension number to be unrestricted.
3.   Press **[SAVE]**.
4.   Press **[SPK]** to return the set to idle.

Check Out:
1.   Press **[Hotel]** and the digit 2.
2.   Dial the extension number to be restricted.
3.   Press **[SAVE]**.
4.   Press [SPK] to return the set to idle.

Conference

You can conference any two parties, internal or outside CO lines.

Establish your conversation with the first party.
Press HOLD to hold the first party.
Get the second party on the line.
Press DND/CN when you have the second party on the line.
You know have a three way conference.

You may continue this procedure to add additional parties to the conference.

You can leave the conference and allow the other two parties to continue the conversation. Just press the DND/CN key before you hang up. If you don't press the key and just hang up, the other parties will be disconnected, if they are both outside lines.

To rejoin the conference, press either CO line button and then the DND/CN key.

If you cannot rejoin an unsupervised conference, you may not have the capability in your class of service. Check with your system administrator or check system programming to see if your override capability is enabled.

Conversation monitor

If you need to monitor a conversation for any reason, this feature will let you observe an existing conversation. Please be aware that this option is a level controlled option (from system programming), so you may be able to override no phones, a few phones or all phones, depending on your telephone's access level. Some stations may not have access to this feature.

Dial a station. It is busy.
Press #. If you have access, you will be connected to the station.

Date and Time Setting (Operator Function)

You must be a system operator to set the date and time.

Press PGM.
Press HOLD
Press 7
Press SAVE
Enter the two digit month (01 - 12)
Enter the two digit date (01 - 31)
Enter the two digit year (97 - 99 or even further)
Enter the hour (00 - 24).
Enter the minute (00-59)
Enter the day of the week (0=Sunday - 7=Saturday)
Press MSG.

Day / Night Service Switching Setup (Operator function)

With this feature, you can make incoming calls ring in different places based on day time or night time. You should have a LCD equipped telephone to use this feature. It also controls the dialing (toll restriction) capabilities of telephones if your installer programmed it that way). Yes, you must be an operator to do this. The change from day to night service may be either automatic, or it may be under manual control of the operator.

Selecting Manual or Automatic Switching:
Press PGM.
Press TRF/FL.
Your telephone will display the current mode (day or night) and status (automatic or manual).
By pressing the * key you will "toggle" between automatic and manual switching.
When you are finished, press SPKR.

Selecting Day or Night Mode When in Manual Switching Mode:

Press PGM.
Press TRF/FL.
You can alternate between Day Service and Night Service by pressing the TRF/FL key.
When finished, press SPKR.

> OR
>
> If you have a Day/Night button, you can achieve the same results simply by pressing the DAY/NIGHT key.

Note: Programming of Automatic schedules is done as a function of system programming. For more information on Automatic scheduling, see Form 20 in the Programming Forms section of this manual.

Dial By Name

Dial by name allows you to use your TransTel DK1-D LCD equipped telephone set to dial intercom calls, personal speed dial calls, and system speed dial calls by name rather than by number.

Note: In order to utilize Dial By Name, your telephone must be equipped with LCD and a programmed Directory button.

1.   Press **[DIR]**.
2.   The LCD will display: **1= Intercom**
                                    2= Speed Dial

3.   Select the directory that you want to utilize by pressing either **[1]**, or **[2]**.

Note: Depending on how your system is programmed, steps 2 and 3 may not appear.
4.   The LCD will display: **ENTER LETTER**
5.   Using the numbers on the keypad, enter the first letter of the name that you want to dial.
6.   When the letter that you want is displayed in the lower left corner of the LCD, press **[VOL]**. The lower portion of the display will show the first matching name. If that is not the name you want, you may press **[VOL]** again to scroll through the names. When the end of the list is found, the system will "wrap around" and present the first name on the list again.
7.   When you see the name that you want, lift the handset or press **[SPK].** The call will be automatically dialed.

Note: System program 05-05-05 must be enabled beforehand in order for Dial By Name to operate.

Dialing Operator

Lift the handset or press SPKR. (Optional when dialing the operator).
Press 0.
Your telephone will ring the operator's station.

Direct Trunk Access

Using this method, you can "punch in" to an outside line.

Lift the Handset or Press SPKR (Optional).
Press CO trunk button.
You will be connected to the CO line you pressed (if you have access to it).

Do Not Disturb

You can block incoming ringing from individual extensions, including paging announcements to them. If your telephone is in Do Not Disturb, you can still place calls and use features of the telephone. Any station that calls you and is equipped with an LCD will see "DND" in the upper left portion of the LCD. Please note that transferred CO calls will not honor DND.

Added G1-a20u: DND is honored for all calls, including transferred CO trunk calls if 78-st-04 is forwarded to a hunt group. In such cases, any transferred calls (internal or external) or directly dialed calls (internal) calls will be forwarded to the hunt group specified in 78-st-04.

Press DND/CN key.
The DND/CN Light will flash. Your telephone is in Do Not disturb.

To cancel Do Not Disturb:

Press DND/CN key.

Environment Monitor

This feature is similar to the Room Monitor, except that this can be done to a telephone without a prior setup. You can be "sneaky" about listening with this option.

Lift handset or press SPKR.
Dial 7, 7, 4.
Dial the extension number of the station you want to monitor.

You will be connected to the station you want to monitor.

Note: *You can only use this feature to monitor either an DK-1D or DK-1S Electronic Set.*

Exclusive Hold

Exclusive Hold allows you to place a call on hold without the worry of someone else picking it up from hold by accident. Exclusive Hold only applies to outside calls. When a call is on exclusive hold at your station, the line appears to be in use (not on hold) at all other stations.

While you are on a call.

Press HOLD HOLD *(that's pressing HOLD twice).*
The call is placed on Exclusive Hold for your extension.

You can alternate between Exclusive Hold and System Hold with each press of the HOLD key.
As noted above, to place a call on Exclusive Hold, press HOLD twice.
Pressing HOLD again will return the call to regular system hold.
Another press of the HOLD key will return the call to Exclusive Hold.

To retrieve a caller from Exclusive Hold at your station.

Lift Handset or press SPKR.
Press the line button that you placed on Exclusive Hold
OR
Dial 80 plus the line number that you placed on hold
You will be connected to the caller.

To retrieve a caller from Exclusive Hold at another station. (Yes, you can get a call from another extension…but you have to make an effort to pick it up. It's difficult to pick this call up by accident).

Press CO line button. Press HOLD.
You will be connected to that caller.

Feature Menu

Digital LCD telephones allow you to select, activate and program most system features even if you do not have all the keys that are required to program. This is called the feature menu.

1. Press **[PGM]**,**[0]** . The LCD will begin scrolling through the feature menu. Each menu item will be displayed for two seconds. The system will then scroll to the next menu item.

2. You may press **[*]** to step the display backwards or press **[#]** to move the display forward. At any time you may press **[0]** to access the feature that is displayed on the LCD.

3. Feature programming or activation continues according to the individual descriptions in this features guide.

Note: The feature menu also lists the keystrokes required in order to invoke or program a function within the Superkey system.

Flash (To an outside telephone line)

Use this feature to make use of telephone company services such as Call Waiting and Three way calling.
Or to access Centrex features like call transfer and call conferencing.

Press the TRF/FL key.
The outside line will receive a flash.

Note: This feature is dependent upon system programming. Some program settings will provide a disconnect when the TRF/FL button is pressed.

Forced Account Codes

If telephones are restricted within the system, this feature can allow people to enter a code and place calls on a telephone that otherwise would be restricted.

Press PGM.
Dial 4
Enter the forced account code.
If the forced account code you dialed is recognized by the system, you will be connected to a CO line. You can then place an outgoing call.
If the system does not authorize your account code, you will hear busy tone.

Group Listen

Added in G1-a20u. For DK2 sets (s/w version 22 and newer) and DK3 sets (s/w version 15 and newer), Group Listen may be selected.

This function keeps the handset operational and also activates the speaker.

To use Group Listen, keep the handset off hook and press the SPK button. The conversation can now be heard over the speaker as well as the handset. However, the microphone in the handset remains active.

From Group Listen mode, a station user can place the handset in the cradle and the telephone will enter Speakerphone mode.

To exit Group Listen mode, the station user presses the SPK button and the telephone reverts to handset operation.

Handsfree Operation

All TransTel Digital Telephone sets may be used in the Handsfree mode for On Hook Dialing and receiving calls handsfree. Models DK1-D and DK1-S offer conversation "Hands Free" on both internal and outside calls. The DK1-B offers handsfree conversations on intercom calls only.

Note: Intercom Handsfree dialing is dependent upon system programming. Some systems may not have this capability.

Placing Intercom Calls:
1. Dial the station number that you wish to reach or press the station's **[DSS]** button.
2. Your station will automatically enter the handsfree speakerphone mode. You will be able to hear call progress tones through the telephone speaker.
3a. If the party answers, you may lift the handset to begin the conversation.
3b. You may begin the conversation or lift the handset and begin the conversation.

Handsfree Dialing (External):
1. Press a **[CO]** line button or dial **[9]**. The **[SPK]** follwed by the **[MIC]** button will light and you will be connected to an outside line.
2. Dial the number that you wish to reach. You will hear all call progress over the telephone's internal speaker.
3a. If the party answers, you may lift the handset to begin the conversation.
3b. If you have a speakerphone, you may talk handsfree.

Alternating Between Handset and Handsfree:
1. While in the Handsfree mode, you may lift the handset to change to the handset mode of operation.
2. While in the handset mode, you may change to the handsfree mode by pressing **[SPK]**. This will allow you to hang up the handset and utilize the built in speaker in the system.
3. These steps may be repeated as many times as you like.

Note: All speed dial functions, including Dial by Name may be accessed in the Handsfree mode. For more information, see System Speed Dialing, Personal Speed Dialing, and Dial by Name in this document.

Immediate CO Line Access

Immediate Line Access will connect you to the first available line in your Dial 9 Group when you lift the handset while in an idle state.

To Enable/Disable:

1. Press **[7]**, **[7]**, **[1]**.
2. If Auto Line Access was previously disabled, it is now enabled. If it was previously active, it is now disabled.

Note: Automatic Line Access is only applicable when the handset is lifted. Activation of the [SPK] button will still provide intercom dial tone. You may still place intercom calls by pressing the DSS button of the desired party.

Intercom dialing

An intercom call allows you to talk to another station within your telephone system.

Lift Handset or press SPKR.
Dial the extension number of the station you wish to reach.

You can reach another station by using a DSS button if you are equipped with one.

Lift Handset or press SPKR. (Optional)
Press the DSS button of the station you want to call.

Last Number Redial

This feature lets you redial the last number you just called. It's great when you want to catch that busy number as soon as it's free!

Lift the handset or press SPKR. (Optional)
Press REDIAL.
The last (outside) number you called will be dialed again.

Lock / Unlock SMDR from Console

If your system is equipped with an RS-232 port and is using a printer to keep a telephone log, you can temporarily suspend the output of the RS-232 port so you can change the paper on the printer or for any other reason where the printer needs to go off line. If you lock the SMDR port, calls will be stored in the TD-824i until you re-enable the port.

Press SPKR.
Dial 7, 7, 2.
This will toggle the RS-232 port on or off.

If you have an LCD equipped telephone, the display will show the current status of the SMDR port. If it is on, the display will show "SMDR IS UNLOCK." If it is off, the display will show "SMDR IS LOCK."

Macro Keys

This feature will let you program your own "custom" function onto up to 4 keys on your telephone.

Press PGM.
Press one of the assigned Macro Keys (15-22).
Dial the exact keystrokes that you want to save. (Up to 5 keystrokes)
Press the assigned Macro Key again.

Mute

Use the mute function any time you don't want the outside party to hear what you are saying.

While you are on the handset:
Press MIC/AT key.
The microphone on the handset will be muted. The LED on the MIC/AT button will flash rapidly.
Press MIC/AT key.
The microphone on the handset will be enabled. The MIC/AT button will go dark.

While you are on the speakerphone:
Press MIC/AT key.
The microphone on the Speakerphone will be muted. The LED on the MIC/AT button will flash rapidly.
Press MIC key.
The microphone on the Speakerphone will be enabled. The LED on the MIC/AT button will remain lit.

Operator Set Timed Reminder or Wakeup (Remote Setup)

This allows the system operator to set a Timed Reminder or Wake Up call for another station within the system.

Press PGM
Press REDIAL
(Or Press Remind if your phone is equipped with a REMIND Key)
Enter the extension number of the station you where you want to set up a reminder or wake up call.
Enter the time for the reminder (24 hour clock, please).
Enter the type of call (01-98 for a reminder, 99 for a wakeup call).
Press SAVE.
Press SPKR

Operator Timed Reminder or Wake Up

Note: This sets a message only on your own station!

Press PGM.
Press HOLD.
Press 8.
Enter the time you want the reminder to occur (must be in 24 hour format).
Enter the duration (01 through 98). That is how long you want the reminder period to be. This type of reminder will
     occur every day at the same time.
OR
Enter 99 for a Wake Up call. This call will occur only once, then never again.
Press SAVE.
Press SPKR to exit.

To cancel:
Press PGM.
Press HOLD
Press 8
Press HOLD.

Paging

Internal Zone

Lift the handset or press SPKR.
Press # and 2.
Then press the one digit Paging Zone Code. (1-8)
You will be connected to the telephones in that zone.

All Paging

Lift the handset or press SPKR.
Press # and 0.

Pulse To Tone Conversion

This feature is of use to you if you are located in an area where your telephone company does not accept DTMF (Touch Tone),This feature lets you dial DTMF (Touch-Tone) for services such as remote voice mail, bank by phone, etc.

Press MSG key.
Your telephone set will now dial DTMF digits instead of pulse dialing on a CO line.

Room Monitor

If you need to listen in on another room, such as a baby's room or a secured room, you can set this function up so that any telephone in the system can monitor the room by dialing the extension number.

At the telephone that you are going to monitor:
Press the SPKR key or take the handset off hook.
Dial 770.

The telephone is now in the room monitor mode. Any station can now dial the extension number of the station and be placed in the Room Monitor mode. The calling station will hear room activitiy. This connection will stay in place until the calling station hangs up or until the Monitored station is placed on Hook or the SPKR is turned off.

Only one station at a time can monitor a room, but the monitored station will stay in the room monitor mode until it is reset. So you can set up a monitor from one telephone and if your activities take you to another room, when you leave the first room, hang up. When you get to the next room, you can re-enter the monitor mode at the new extension, so you can go all over a building and still be able to monitor an individual room.

Saved Number Redial

Saved Number Redial allows you to save a telephone number for use at a later time. This feature is in addition to Last Number Redial.

Automatic Save:

1. You have dialed an outside call. The number does not answer or is busy.
2. Press **[SAVE]**.
3. The lower portion of the LCD (on display telephones) will display:

<div align="center">

Auto Save

</div>

4. You may hang up.
5. Make other calls if you wish.
6. While your telephone is idle, press **[SAVE]**.
7. The telephone will access an available line, turn on your speaker and redial the saved number.
8. If you take no action, the system will monitor the call for a programmable period of time and then disconnect the call and return your telephone to idle.
9. The telephone set will periodically access a CO line and continue to redial the saved number. Steps 7 and 8 will continue for a programmed number of times or until you lift the handset or press **[SPK]** while the system is on the line or until you make another call.

Note: If you lift the handset or press **[SPK]** immediately before step 6 above, the system will dial the number without the automatic redial functions taking effect.

Saved Number Redial (SuperSave)

You are on an outside call and you need to save a number for dialing later. Supersave provides a way for you to save the number to your telephone set so that you can dial it later.

<u>**SuperSave:**</u>
1. You are on an outside call.
2. Press **[SAVE]**.
3. Dial the new telephone number that you wish to save.
4. You may hang up.
5. Make other calls if you wish.
6. While your telephone is idle, press **[SAVE]**.
7. The telephone will access an available line, turn on your speaker and redial the saved number.
8. If you take no action, the system will monitor the call for a programmable period of time and then disconnect the call and return your telephone to idle.
9. The telephone set will periodically access a CO line and continue to redial the saved number. Steps 7 and 8 will continue for a programmed number of times or until you lift the handset or press while the system is on the line or until you make another call.

Shift Key

The shift key allows you to use an alternate key map. It is used primarily when you have a use for more keys than your telephone is capable of displaying. This requires system programming to enable.

Press your SHIFT key (which has been programmed on one of the DSS buttons on your telephone. The SHIFT key will light. While you are in SHIFT key mode, your telephone will operate as if it is in the SHIFT key group. To return to your own group, press SHIFT key again and the SHIFT light will go out. You are now in your telephone's regular key group.

Speed Dialing

You can use this feature to access frequently dialed telephone numbers.

Lift the handset or press SPKR.
Press SPD key.
Dial 100 through xxx (for system speed dial).
OR Dial 00 through 09 (for personal speed dial).
OR press a DSS button (for personal speed dial).

Speed Dial Programming

There are three types of speed dial in the system, numeric personal speed dial, DSS personal speed dial and system speed dial. This section shows you how to program and personal speed dial if you are a regular station. If you are the system attendant (operator), your methods will be different - Please See Programming Speed Dial (Operator).

Note: There are three special keys that you may need to use when programming speed dial numbers. They are:

HOLD - When entering a speed dial number, if you press this key, the speed dial will pause for approximately 2 seconds (this time is programmable, but 2 seconds is the standard length). You may press HOLD multiple times for a longer pause.

TRF/FL - Pressing this button while you are entering a speed dial number will cause the system to perform a hookswitch "flash" to the outside telephone line. This may be of use if your telephone system has Centrex or special telephone company provided features.

MSG - This key will cause the telephone to stop using pulse (rotary) dialing and begin using DTMF (Touch tone). This may be useful if your telephone company doesn't recognize Touch Tone, but you need to access remote banking, paging, or voice mail services that require Touch Tone digits.

Programming Personal Numeric Speed Dial

Press PGM
Press SPD.
Press the number that you want to program (0-9).
(If you want the speed dial number to access a specific telephone line every time it places the call, Press the MIC button and dial 0 plus the line number. Otherwise skip this step.)
Enter the telephone number you want to dial.
Press SAVE.
Press SPKR.

Programming Personal DSS Speed Dial

Press PGM
Press SPD.
Press the DSS button that you want to enter (DSS button 1 through 10).
(If you want the speed dial number to access a specific telephone line every time it places the call, Press the MIC button and dial 0 plus the line number. Otherwise skip this step.)
Enter the telephone number you want to dial.
Press SAVE.
Press SPKR.

Speed Dial Programming (Operator).

Programming (Operator) Personal Numeric Speed Dial

Press PGM
Press SPD 8.
Press the number that you want to program (0-9).
(If you want the speed dial number to access a specific telephone line every time it places the call, Press the MIC button and dial 0 plus the line number. Otherwise skip this step.)
Enter the telephone number you want to dial.
Press SAVE.
Press SPKR.

Programming (Operator) Personal DSS Speed Dial

Press PGM
Press SPD 8.
Press the DSS button that you want to enter (DSS button 1 through 10).
(If you want the speed dial number to access a specific telephone line every time it places the call, Press the MIC button and dial 0 plus the line number. Otherwise skip this step.)
Enter the telephone number you want to dial.
Press SAVE.
Press SPKR.

Programming (Operator) System Speed Dial Numbers

Press PGM
Press SPD 7.
Press the number that you want to program (100-*xxx*).
Press MSG.
(If you want the speed dial number to access a specific telephone line every time it places the call, Press the VOLume Down button and dial 0 plus the line number. Otherwise skip this step.)
Enter the telephone number you want to dial.
Press MSG.
Press SPKR.

Station Lock / Unlock

This feature lets you lock your telephone so that no one can make unauthorized telephone calls on it. In order to unlock your telephone, you must remember the 3 digit long "password" that you enter when you lock it. You will need this to unlock your telephone. You can create any 3 digit code to lock your station, but the code to unlock it MUST be the one that you used to lock it!

To lock or unlock your station:

Press PGM.
Dial 9.
Enter your 3 digit "password."
Press SAVE.

Your telephone is now locked.

To temporarily unlock your station (This will allow you to make one telephone call. Then it reverts back to a locked state):

Press PGM.
Dial #.
Enter your 3 digit "password."
You will be connected to the outside world. You may dial your call.
Your telephone will revert to the locked state when you hang up.

Switching between Handsfree and Handset mode

If you want to switch from the handset to speakerphone….or vice versa.

While on the handset:
Press SPKR.
Place the handset back in the cradle.
You are now in Speakerphone mode.

While on the Speakerphone:
Lift the handset.
You are now in the handset mode.

Added in G1-a20u: Group Listen. For DK2 sets (s/w version 22 and newer) and DK3 sets (s/w version 15 and newer), **Group Listen** may be selected, which keeps the handset operational and also activates the speaker. To use this function, keep the handset off hook and press the SPK button. The conversation can now be heard over the speaker as well as the handset. However, the microphone in the handset remains active.

From Group Listen mode, a station user can place the handset in the cradle and the telephone will enter Speakerphone mode.

To exit Group Listen mode, the station user presses the SPK button and the telephone reverts to handset operation.

Timed Reminder or Wake Up

With this feature, you can set an appointment reminder, that will alert you only once, or you can set a daily reminder that will happen every day at the same time (like when it's time to stop working and go home). **Note: If you are a system operator, the procedure you follow will be different. Please see Operator Timed Reminder or Wake Up.**

Press PGM.
Press HOLD.
Enter the time you want the reminder to occur (must be in 24 hour format).
Enter the duration (01 through 98). That is how long you want the reminder period to be. This type of reminder will occur every day at the same time.

OR
Enter 99 for a Wake Up call. This call will occur only once, then never again.
Press SAVE.
Press SPKR to exit.

To cancel:
Press PGM.
Press HOLD HOLD (that's Hold….two times).

Trunk Queuing

If you need an outside line and none are available, this feature will make sure you get one when it becomes available.

Lift the handset or press SPKR. (Optional)
Select a CO line (either by dialing 9 or by pressing a CO line button)
Press MSG key.
Hang up.
When the CO line (or one of the lines in your Dial 9 group) is free, your telephone will ring. When you answer it, you will be connected to the outside line.

Trunk Group Access (Dial 9)

This is one method of getting an outside line.

Lift the handset or press SPKR. (Optional for Dial 9)
Dial 9.
You will be connected to an available line in your dial 9 group

Voice Service Unit (Operator Function)

The Voice Service Unit has up to 8 channels on which you can record up to 8 different messages. The actual number of messages that you record will be determined by how your system is programmed. This section explains how to record and playback the messages so that the system can use them. Remember, the Voice Service Unit allows a maximum of 60 seconds total recording time.

To Record (Operator only):
Lift handset (we don't recommend that you make the recordings using the Speakerphone).
Dial 86.

Dial 0
Record your message after the tone.
To stop the recording and select the next voice channel, press 1.
To record the next segment, dial 0 . Repeat as necessary.
Your LCD display will always show you which channel you are currently recording.

Please note that you cannot record one message and then record another message at another time. When you record a message, you must record all messages, one after another. In the future, if you need to update a message, it will be necessary that you re-record all messages.

To Playback (Operator only):
Lift handset or press SPKR.
Dial 86

Dial 7 to play the first message.
Press 1 to advance to the next message.
Continue the Dial 7 and Dial 1 sequence to hear all messages.

When you are finished, either put the handset back in it's cradle or Press the SPKR button (which ever is appropriate).

Voice Mail Access

A Voice Mail Access Key is typically programmed on each telephone set of each station user. This Voice Mail Access Key represents the total number of voice mail ports in your system. The voice mail ports are assigned in system programming into a hunt group. By pressing the Voice Mail Access Key, you are making a call in a hunting or rollover fashion to the available voice mail ports in the system. The Voice Mail Pilot number for the voice mail hunt group is programmed on a key by using Form 07.

<u>To access voice mail ports</u>

1. Press the voice mail access key and listen for the voice prompts. An available voice mail port will be accessed. If the auto login feature is enabled, you will be asked for your security code.
2. Enter your security code.
3. You are logged in to the voice mail system and may use various features that are spoken to you by the voice mail system.

Voice Mail Live Call Recording

Live Call Recording allows you to record a conversation directly into your mailbox for retrieval at a later time.

<u>**During a Conversation:**</u>
1. Press the Record key on your telephone set. The voice mail system will be notified of your request to record the conversation automatically. At the end of your conversation, the voice mail system will light your MSG key, indicating you have a new message.

<u>**To Stop a Recording without Ending the call:**</u>
1. Press the **[HOLD]**, placing the caller on hold. Then retrieve the call from hold. Live call recording is terminated when you place the caller on hold.

Voice Mail Message Retrieval

When messages have been left in your voice mailbox, you will notice a flashing MSG key on your telephone set. LCD equipped digital telephones will also have an indication of *xx* Messages.

<u>**To retrieve your messages:**</u>
1. While the MSG key is flashing, press the **[MSG]** key.
2. **Call *XX (Voice Mail Port Name)***
   automatically call the Voice Mail System. If you have messages from other station users, you may scroll through the messages by pressing [**VOL** or **[VOL** until you come to the Voice Mail Message, then press **[SPK]** or lift the handset to make the connection.
3. If the auto login feature is enabled you will be prompted to enter your security code. After entering your security code, proceed with the voice prompt instructions to retrieve your messages.

Voice Mail Transfer Key

The Voice Mail Transfer Key allows user's the ability to transfer outside callers directly to the personal mailbox greeting of the desried station user.
For example, a call comes into the system and the caller would like to leave a voice message for John Smith. The Operator knows that John Smith is out of the office and can use the Voice Mail Transfer Key to send the caller directly to his mailbox.

<u>**During a conversation with an outside party:**</u>

1. Press the Voice Mail Transfer Key. The line goes on hold automatically.
2. Press desired **[DSS]** key or enter the station number. Hang up.

Volume Control

If the person on the other end isn't quite loud enough....or is too loud!

Press Vol UP to increase the volume level.

Press VOL DOWN to decrease the volume level.

Volume Levels Programming (Permanent)

You can permanently set the volume levels on your telephone.

Press PGM.
Press 6.
Dial 1 to set Ringing Volume.
OR
Dial 2 to set Speaker Volume.
OR
Dial 3 to set Handset Volume
OR
Dial 4 to Set Ringing Volume Increase (Rings louder as the call ages)
OR
Dial 5 to set the Ringing Frequency (Pitch)
 And adjust the pitch using your volume up and down keys on your telephone.
OR
Dial 6 to set Microphone Level
OR
Dial 7 to set Camp-On Tone Volume
Press the Volume UP or Volume DOWN to reach the desired volume level.
Press PGM when finished.

Access Control Phone Operation Manual

Intercom (as doorphone)

Operation:

1. Press [♪] to call the associated hunt group and open the door; or
2. Dial extension number, then press [♪] to call an individual extension to answer and open the door.

Note: [♪] calls the hunt group according to TD-824i system settings:
   ACP Hunt Group Routing - See Programming Form 46-st-07 (0-9 = Group 1 - Group 10 / "d"=Form 03)
   Hunt Group Pilot Number - Form 67-GP (GP = 01-10)
   Hunt Group Members - 68-GP-01-05 (GP=01-10)

Intercom (as Hotline, to external telephone number) [G1-a10b]

Operation:

1. Press [♪] to call the associated speed dial number and open the door.

Programming Required:
50-ACP-08=0
40-ACP-03=1 (3 minute call limit duration – required)
05-04-03=7 disconnect at timer expiration (also required)
47-ACP= SPD:100~354

This option only provides external forwarding in Night Service. During day service the doorphone always follows ringing information as programmed on Form 46-st-07.

Outgoing call (as wall mount phone)

Operation:

1. Press [9] to access an outgoing trunk.
2. Press [♪] to disconnect and return to idle.

Note: Auto-answer is available for both intercom and in-coming call.

Access via password

Operation:
 Press [♪]+[7]+[password]+[#] to open the door (Display will show 'PASS')

Note: On invalid password, ACP will play busy tone for 5 sec and display will show 'ERR'.

Access via proximity card(Touch-N-Go)

Operation:
Use the registered and authorized card, touch and go (Display will show 'PASS')

Note: On invalid card, ACP will play busy tone for 5 sec and display will show 'ERR'.

Access via password and proximity card

Operation:
[Touch the card]+[password]+[#] to open the door (Display will show 'PASS')

Note: On invalid password or card, ACP will play busy tone for 5 sec and display will show 'ERR'.

Check out (lock) ACP (as wall mount phone)

Operation:

1. $[(M)]$+[8]+[password (3-digit)] to lock up ACP (as wall mount phone) to prevent it from use by others.

2. $[(M)]$+[#]+[password (3-digit)] to un-lock ACP (as wall mount phone) for temporary use (making a call) by the owner. After the use, ACP is locked up again.

Burglary Report

When the sensor is opened, ACP will signal PC for application of warning or asking help. (Not currently available)

Time Display

When ACP is idle, display will show the time ('08.30' for 8:30AM).

As a wall mount phone

When ACP is in use of as a wall mount phone, 'auto answer' is operational for both intercom call and incoming call.

ACP Related Programming

Extension Number length for ACP

Form 05-03-06

'Voice' announce or 'ring' announce for ACP

Form 05-03-03. '0' for Voice Announce; '1' for Ring Announce.

Hunt group for ACP

To specify the groups associated with the ACP (as doorphone).
Form 46-st-07 (0-9 = Group 1 - Group 10)

Hunt Group Pilot Number

Form 67-GP (GP = 01~10)

Hunt Group Members

68-GP-01-05 (GP=01-10)

Station Hunt Group Ringing Method

Form 05-06-08 (0=common audible, 1=linear ringing 2=circular ringing)

Station Function Form 46-st-08

There are three parameters under control of 46-st-08.

1. ACP Functions as:
    a. Doorphone
    b. Wall Mount Telephone
2. Door lock function activates the relay:
    a. in the ACP
    b. in the KSU.
3. Security Access is:
    a. Via password OR Identification Card
    b. Via password AND Identification Card.

Form 46-st-08 ACP Function (Applies only to stations equipped with ACP Device)			
Value	Doorphone / Wall Mount Phone	Activate Relay	Security Access
0	Doorphone	Inside ACP	ID Card **OR** Password
1	Wall Mount Keyphone	Inside ACP	ID Card **OR** Password
2	Doorphone	Use TD-824i MSC Card	ID Card **OR** Password
3	Wall Mount Keyphone	Use TD-824i MSC Card	ID Card **OR** Password
4	Doorphone	Inside ACP	ID Card **AND** Password
5	Wall Mount Keyphone	Inside ACP	ID Card **AND** Password
6	Doorphone	Use TD-824i MSC Card	ID Card **AND** Password
7	Wall Mount Keyphone	Use TD-824i MSC Card	ID Card **AND** Password

Dial 9 Access (System Option)

Form 05-04-02 = 0

Forced Account Code for ACP (as wall mount phone)

Form 17 (01-48) (Program Forced Account Code)
Form 40-st-08 = 01-48 (specify the Account Code programmed given in Form 17 for a specific station)

Password for ACP (as doorphone)

There are two ways to assign a password for ACP

1. Use/share the same code given for FAC; Form 17 & Form 40-st-08
2. Use the password in Form 13-05.
   This password will be available for all ACP in the system.

Note: Password given in Mode 13-05 will only be applied when FAC is not used or programmed.